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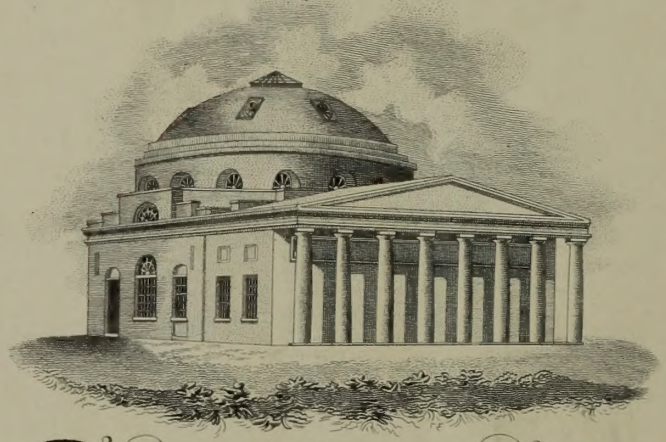

University of Maryland

University of Maryland Theses

Early Doctor of Medicine and Doctor of Physic Dissertations with Corrected Tables of Contents

These manuscripts described as either an Inaugural Dissertation or an Inaugural Essay were presented to the University of Maryland for the Degree of Doctor of Medicine and/or Doctor of Physic during the years 1813-1887. The individual dissertations were bound together during the 1940's. The original tables of contents for the bound volumes contained multiple errors in authors' names, titles, and/or years. To address these errors, an additional "Corrected Table of Contents" has been inserted at the beginning of each volume.

The project team who investigated and corrected the tables of contents were Richard J. Behles, Historical Librarian/Preservation Officer; María Milagros Pinkas, Metadata Management Librarian; Angela Cochrane and Carol Harling-Henry, Resources Division; Sarah Hovde, Abra Schnur and Megan Wolff, Services Division.

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UNIVERSITY OF MARYLAND

THESES

1874 (b)

Author	**Title**
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Cairnes, C.F.	Typhoid Fever
McDowell, Charles C.	Hygiene
Buck, R. Carey	Diagnosis of Diseases of Childhood
A. R.[1]	Typhoid Fever
Gavin, Frank Denton	Pseudo-Membranous Laryngitis
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Price, Eldridge C.	Visual Accommodation
Billingslea, Martin B.	Scarlet Fever
Wilkinson, J. Marion	Bronchitis

[1] Two students listed under the year 1874 are listed with A.R. initials: Albert J. Remsberg; and Augustus Riggs

HSHSL 2012 for the UM Digital Archive. Sources consulted for corrections: Original Dissertation; University of Maryland Medical Faculty, Matriculation List, 1851-1892; Cordell, Eugene F. "University of Maryland, 1807-1907" (New York : The Lewis Publishing Company, 1907), Volume 2.

Author	Title
Ames, Howard E.	Incised Wounds
Smith, J. Dawson	Dysentery
Shepherd, J. T.	Dysentery of Children

HSHSL 2012 for the UM Digital Archive. Sources consulted for corrections: Original Dissertation; University of Maryland Medical Faculty, Matriculation List, 1851-1892; Cordell, Eugene F. "University of Maryland, 1807-1907" (New York : The Lewis Publishing Company, 1907), Volume 2.

UNIVERSITY OF MARYLAND

THESES

1874 (b)

Butler, M. S.	Hysteria[1]	21p.
Gorsuch, J. ~~E.~~ Edmund	Gastritis	23p.
Cairnes, C. F.	Typhoid Fever	24p.
McDowell, ~~C.~~ Charles C.	Hygiene	12p.
Buck, R. Carey	~~Diagnosis of Childhood~~ Diagnosis of Diseases of Childhood	20p.
A. R.	Typhoid Fever*	9p.
Gavin, ~~F. D.~~ Frank Denton	Pseudo-Membranous Laryngitis	22p.
~~Friisson,~~ Ferguson Wickliffe	Colica Pictonum	20p.
Rowland, Samuel	Pathology of Phthisis Pulmonalis	30p.
Handy, ~~Wm. N.~~ William Neiatt	Scarlatina	18p.
~~Mullinix, E. B.~~ Mullineaux, Elisha E.	Diphtheria	23p.
Cheatham, D. Lewis	Typhoid Fever*	33p.
Price, ~~E.~~ Eldridge C.	Visual Accommodation	48p.
Billingslea, ~~M.~~ Martin B.	Scarlet Fever	38p.
Wilkinson, J. Marion	Bronchitis	19p.
Ames, ~~H.~~ Howard E.	Incised Wounds	11p.
Smith, J. Dawson	Dysentery	26p.
Shepherd, J. T.	Dysentery of Children	15p.

* Anatomical Character, Causation & Clinical History of Typhoid Fever

(1) Faded ink

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A THESIS

on

GASTRITIS

Respectfully submitted to the

Provost Regents and Faculty of Physic

of the

University of Maryland

for the

Degree of Doctor of Medecine

by

J. Edmund Bersuch.

of

Black Rock,

Baltimore County Md.

A.D. 1870.

"It is in compliance with a law of the University of Maryland, of which I have the honor to be a pupil, that I attempt to write an enlarged dissertation; at the same time knowing my inability to suggest any new ideas, on any medical subject that I may select. I have concluded, however, after a brief reflection, to submit to your perusal a few pages on a subject formerly supposed to occur frequently, but at the present day a rare disease, viz. Gastritis

"Gastritis is defined to be an inflammation of the coats and mucous membrane of the stomach; more particularly the latter.
It is divided into three forms, acute, sub-acute or gastro-enteritis, and chronic gastritis. The morbid anatomy of this disease was almost entirely unknown to the ancients and is at present often difficult to diagnose, owing to the manner in which that organ acts upon various substances; some articles of food being more difficult to digest than others and

consequently a greater determination of blood to the parts, also the tendency of blood to gravitate, and obstruction of the venous circulation which causes congestion of the blood vessels and renders them unnatural. Strict attention must therefore be paid in post-mortems to the contents of the stomach, to the circulation and position of the redness.

The morbid appearances attendent upon this disease are the same as inflammation upon any other organ: redness as a diagnostic sign cannot be solely relied

upon except when it appears in circumscribed spots, when the circulation is free, and when it cannot be attributed to gravitation or increased action.

Sometimes the stomach presents a grayish or dirty brown appearance on various parts of its lining membrane, induration, softening, hypertrophy and ulceration is a frequent sequel which not unfrequently produces perforation of its coats followed by fatal peritonitis.

Acute gastritis is seldom or never an idiopathic disease always produced by some direct action

upon the stomach and not the system at large; Sometimes a chronic case may be made acute from the effects of cold and moisture - The causes that generally produce it irritant poisons such as act both vitally and chemically as corrosive Sublimate or Arsenic, acrid vegitables, also various drinks such as cider beer and cold water after heat and extreme exhaustion, Mechanical injuries and irritants, as a blow or wound, and Foreign indigestible substances frequently swallowed by maniacs and hysterical women.

Sub-acute gastritis generally attacks infants who are improperly fed before the mucous membrane of the stomach and intestines are in a proper condition for digestion, it is also a frequent accompaniment of other diseases and originates from error in diet, exposure to cold, mental excitement and debility, during convalescence metastisis from rheumatism and gout not unfrequently produce it. Chronic gastritis is oftenest found amongst the higher class of society, habitual drunkards and those persons

who labor in stooping posture owing to the want of action on the part of the diaphragm which prevents free venous circulation.

The most frequent cause is a want of proper attention to diet, viz: improper quantity, quality, and hours of taking food. Acute gastritis makes its appearance without any premonitory symptoms whatever.

The first symptom that manifests itself is intense pain over the epigastric and sometimes hypocondriac regions, always increased by pressure

The respiration is thoracic owing to the increase of pain made by the pressure of the diaphragm in ordinary respiration. There is nausea and frequent attempts at vomiting which increase the pain, the matters vomited are of a bilious and mucous character frequently sanious. The patient has incessant longings after cool and acidulated drinks which are immediately vomited much to his distress. The hypogastrium is distended tender and increased in heat, the countenance sunken, sometimes flushed

with hot dry skin and quick pulse. which is generally hard at the beginning but soon becomes weak and thready. The extremities are cold, tongue pointed with redened borders and a white fur upon it;

This form of disease is generally speedy in its termination carrying off the patient frequently in a day, but sometimes of longer duration. There is often a tendency to death by Asthenia owing to the direct sympathy which exists between the stomach

and heart. Acute Gastritis is not unfrequently confounded with acute Peritonitis, but can be distinguished by the locality of the pain, and the matters vomited.

Sub-acute Gastritis as I have stated is more frequently the sequel to a preceding disease than a primary affection. The symptoms are very like the preceding only in a more modified form, pain increased upon pressure, anorexia, nausea, flatulence, dryness of the mouth, red and pointed tongue with elevated papillae. The whole

system seems so much affected through sympathy that the diseased but occasionally escapes observation. Headach, pain in the limbs, feverishness, and cough are not unfrequent symptoms. Whenever it is a secondary disease it renders the primary more aggravated. Colic which it somewhat assimilates may be readily diagnosed by pressure which entirely relieves it whilst it increases the pain if inflammation be present.

It may generally be cured when properly attended to, but mostly it is suffered to go on untill

it assumes a chronic form, the local symptoms of which are the same only more variable and complicated. Pain and tenderness are always increased by ingesta, sometimes there is a sense of weight and fullness at others a vacuum or want of food which affords no relief when taken. The appetite is irregular, and taste vitiated so that whatever is taken leaves an unpleasant and peculiar impression on the mouth and throat. Flatulence and eructations of fetid gases with an extremely

unpleasant odor of the breath, the tounge presents a variety of appearances, sometimes healthy at others covered with a glaizy mucous, frequently incrusted, but generally of a deep red, with the papices somewhat swollen. The skin occasionally hot and presents a papular eruption. The bowels are for the most part constipated in all forms of the disease. Chronic Gastritis is rarely a fatal disease of itself, but when complicated with others it is truly of a serious character. The stomach of all

organs affects the system more through sympathy and especially when in a state of chronic inflammation; the principal organs affected are those of respiration, heart, and liver, the later more directly from contiguity, and inflammation extending through the hepatic duct to the organ itself.

Before treating a case of acute gastritis it is necessary if possible to determine the cause and act accordingly; if produced by poison the first thing is to evacuate the stomach or neutralize the substance,

if the heart and arteries sympathize much and are greatly diminished in action. we might use bloodletting cautiously if at all, so also when originates from a chronic form after much debility; there is no positive rule as regards the quantity of blood to be taken, enough however should be taken to produce some effect upon the system. Leeches are to be applied to the epigastrium in preference to cupe for two reasons, first the pain is to great to bear the cupe, and secondly from the counter irritant effect of the leeches.

which should be applied in small numbers and frequently. Anodynes should also be used on account of the facility with which they can be applied directly to the parts affected. Hyoscyamus is generally preferable for its twofold effect, that of soothing the pains and its tendency to open the bowels, it may be given in connection with magnesia or sodae which neutralizes whatever acidity may exist in the stomach. Iced drinks seem to be most acceptable to the patient and are as beneficial as aggreable

when not taken in too large quantities so as to distend the organ.

Purgatives can seldom be administered by the mouth owing to the irritability of the stomach, the bowels must therefore be opened if constipated which is generally the case, by an enema, the most appropriate of which is castor oil or, this combined with senna; warm or cold applications are to be made to the stomach, which ever is most agreeable to the sufferer. Sub-Acute Gastritis must

be treated nearly the same as the acute with the exception that mild cathartics may generally be administered by the mouth if needed which is seldom the case from the complication of the small intestines, which causes laxiti of the bowels. blistering is often found beneficial also alterative doses of mercury.
In treating chronic Gastritis we must also adhere to a strict antiphlogistic regimen notwithstanding general debility which is an almost necessary consequence. If the nutrition

and strength of the body is not too much reduced we may resort to one general bloodletting and then apply leeches over the part affected they should be applied frequently and few at a time. Some authors recommend three or four to be applied at a time for some days and then every other day gradually protracting the intervals.

The next and not much less important mode of treatment, appertaining to diet, Dr. Watson cured a case

entirely by it and friction which is a great advantage, it should be strictly of the mildest kind. small in quantity, and taken at regular intervals, to keep down the action of the stomach, and prevent irritating it; after a short time the amount of food may be increased gradually and with the utmost caution. Another very important remedy is Counter-irritation. which is best applied in the form of small blisters about the

size of a dollar in various places about over the epigastrium — or by croton oil with friction. Tartar emetic ointment may also be used with efficacy, Anodynes exert in this case also a twofold effect: they both allay pain and alter the state of the nervous, they may be administered internally or applied to the denuded surface, Morphia is mostly used from the minuteness of the dose which renders it most aggreeable to the stomach. Mercury may

be prescribed with a salutary effect untill the gums become slightly swollen and spongy.

We must attend to the state of the bowels which sometimes requires a mild cathartic.

The great similitude between the mucous membranes and the skin often prompts us to the afflications of stimulants which bring about new action within the organs the most appropriate are argenti nitratis, alum Terebinthinae and creasote. Warm

baths may generally be recommended with benefit, gentle exercise and a trip to the mineral springs has been known to effect much in the cure of this disease.

"Thesis"

Presented to the "Faculty of Physic. of the University of Maryland" for Degree of Doctor of Medicine.

By C. F. Cairns

Subject - "Typhoid Fever"

Session 1873-4

Baltimore Dec. 26th 1873

To the Faculty of the University of Maryland:

Gentlemen: It being the duty of every candidate for graduation to prepare a "Thesis" on some subject connected with Medical Science. I have selected "Typhoid Fever" as my subject.

My knowledge of "Typhoid Fever" is solely dependent upon my instruction in the lecture rooms, reading of the text-books, and a few things I have had an opportunity of observing while connected with the hospital of the University.

Therefore I will respectfully ask you to accept this my feeble effort to describe the disease.

"Typhoid Fever" characterized by the name under which it falls, is a long and continued fever, insidious in its onset, invading the system in a slow and protracted manner. This disease prevails very extensively in this country, but not exclusively, for it is common everywhere. Neither does it respect age, sex or color occurring however in the younger class most frequently, and most fatally among the colored race. Symptoms.— They are very slow in

developing themselves. sometimes as long as a fortnight — before you can certainly say the disease is "Typhoid Fever:" the patient may feel very uncomfortable for several days, and complain perhaps of weakness or general uneasiness. soreness or numbness of limbs, with some little head-ache. the Skin somewhat heated. flushed face. and pulse accelerated. the appetite poor, but not entirely lost. and the tongue is found to be slightly coated with a whitish fur. there may be a chilliness alternating with a febrile sensation. though the disease may run its

course without there ever being a chill. when they do occur it is almost always in the first stage. when they are present they generally cease when the disease reaches the period of maturation, and do not return unlesse inflammation from some cause is lighted up. Diarrhoea is another attendent symptom, and is almost always present, and frequently at the beginning of disease. by some considered the characteristic symptoms, but not sufficient alone to rely on, because sometimes the bowels are not moved from the beginning to the end of the disease unlesse

by the aid of some mild purgative. The bowels are most always however extraordinarily susceptible to the action of cathartic medicine. and will respond to very much smaller quantities than usual. This symptoms may last for several days with but little change. before the patient will give up and go to bed.

The symptoms which now follow are of a higher grade. the heat of skin becomes greater. pain in head. [illegible] d limits are more severe. accompanied often with bleeding from nose. the pulse is increased

in frequency amounting to from 130 to 140 per minute. there is also gurgling present in the right iliac region. often attended with tympanitic distention of the abdomen, the urine sometimes changes to a dark color, and scanty.

The disease has now reached the seventh or ninth day, or the second stage, when the rose spots make their appearance. not on the abdomen, and then may extend to the chest and extremities. this eruption is slightly elevated, and can be felt - by passing the finger along ~~over~~ it. by pressure it will be made

to disappear, but will immediately appear again on removing the pressure. The eruption may not always be present, it is said to be less frequent in the country than in cities, and more common in adults than children. The presence of the eruption is no evidence however of the severity or mildness of the attack. Simply being a phenomena of the disease, we as frequently meet with eruptions in mild attacks as severe ones. Along with the rose-spots we frequently have another eruption of a vesicular character called Sudamina. This eruption is most commonly found during warm weather,

and may be found on the neck, chest and abdomen, but like the rose spots in regard to significance having little to do with the prognosis of the case. — By this time the nervous system becomes involved. The pain in head, back and limbs, which accompany the disease in the first seven or eight days usually subside, and we are called upon to deal with another set of symptoms.

Delirium or stupor often supervenes, and may be very slight, or sometimes severe, and become a dangerous symptom, although delirium is not considered a sure

symptoms of the brain being affect-
-ed, but only a morbid condition
of the blood in which the es-
-sential pathology of the disease
exists. Now if these symptoms
which I have mentioned continue
to increase in severity, there will
be a complete Typhoid condition
existing. the tongue being coated
and very dry. the teeth covered
with a brown or blackish sordes,
which sometimes collect on the
tongue, lips and gums. the pulse
is now, as a general rule, exceeding-
-ly weak and feeble. the surface
may be hot or else cool in one
place, and hot in another, the

patient may be covered with a cold sweat with a peculiar odor emanating from the body, and indeed almost characteristic of the disease, with this series of symptoms we will leave this part of the subject and consider briefly the cause.

In regard to the cause I believe they are generally supposed to be excitant, the circumstances however under which the malady exists are so various that nothing of its origin is positively known. It seems that in some persons there exists an inherent disposition to this disease

which may be called into action by any exciting cause which considerably disturbs the vital functions. It is often generated in confined or vitiated atmosphere, also by want of proper food. there may be sufficiency of food, but its unwholesome character may be exciting cause. exposure to sudden changes of temperature may be considered among the exciting causes. There are many exciting causes. another of which is fatigue, or over exertion, thus it may be said, this fever is more common with the laboring class, than with the wealthy or men of leisure, yet the latter class are

not escape from its most fearful effects. Continued exposure to the intense heat of Summer is and another cause by "Typhoid Fever" is generated, this perhaps may account for the many cases we meet during the Summer months, also exposure to the many changes of weather which persons are subjected is another, real cause of all kinds of disease, and of course equally so with the one which we are now considering. There are many other causes mentioned, but we will consider but one more, viz- the probability of persons taking the disease from the excretions from

the bowels, or rather the excre-
-ment of Typhoid patients, this
we think a very probable cause.
In Flint's valuable work on Prac-
-tice of Medicine we find several
cases recorded, where the disease
was thought to rise purely from
this cause, viz.- the miasmata ari-
-sing from the excrements of "Typhoid
Fever" patients; we do not speak of
this cause from experience, but from
what we read only, we think
it a point however well worth
remembering especially in a city
practice, for it is in cities where
this cause is most likely to be
met with, on account of the adja=

-cent dwellings which serve to a great extent obstruct ventilation. Having now given a few of the many causes of "typhoid fever" there still remain many other, some of which we will observe for ourselves when called upon to treat the disease in a private practice. Those which we have mentioned if avoided will be a good safe-guard against the dreadful malady.

Diagnosis. Our chief guide is the frequently, slow mode of attack, as we have mentioned in the beginning, when describing the symptoms. the great tendency to diarrhoea.

the dull expression of countenance. epistaxis being almost always present among the early symptoms. also the rose colored spots which in most cases make their appearance from the ninth to the twelfth day. tym-
-panitic distension of the abdomen. and the diminution of the secre-
-tions.

The disease which "Typhoid Fever" mostly resembles is "Bilious" or "Remit-
-tent Fever". but by the bilious vom-
-iting. yellowness of the Skin. and positive remission. together with the absence of the rose spots. epistaxis &c of the latter. I think it can readily be distinguished.

tenderness in the right-iliac region over the glands of Peyer with gurgling, when present is surely a very significant diagnostic symptom. the history should be inquired into and studied as a valuable auxiliary in making our diagnosis.

Prognosis.- In making our prognosis we should be very careful in expressing our views, as it is a very difficult to tell the termination of the case. In all stages of the disease even in the most malignant epidemics there should be hopes of recovery, as patients have recovered when both kinds

and Physician despaired and regarded them as being on the very verge of death. In the language of Hood, "there is no condition so low, no symptoms so fatal, that death should be considered as inevitable" "It is only in articulo mortis that the case should be given up". When a case is to terminate favourable, the tongue becomes moist, the pulse less frequent, the skin cooler, the patient becomes more attentive to things about him, and as a general rule has a craving appetite. But on the other hand, if the pulse becomes fluttering, and the extremities cold and clammy,

the body bathed in a profuse, expiration with hiccough. There is but little hope of recovery and the patient may sink and die at any moment.

Treatment.— I do not think it advisable in the beginning of the disease to commence to active medicine, especially those of a cathartic nature. Still the alimentary canal should be thoroughly evacuated in order to prevent irritation of the intestines by hardened feces which may accumulate. To accomplish this it is only necessary to use a small dose of Castor oil or Mag. Sulphas. Sometimes

there is diarrhoea at first attended with pain. when this occurs we may continue with the Castor oil tea or fifteen drops Tinc opii. almost any mild laxative may be given in the early part of the disease. a single Seidlitz powder may some times answer. "In cases of high fever I use nitrous powder" says Prof. W. Sherry

℞. Potash Nitras gr. x
Hydrarg. chlor. mit.
Pulv. Cicae ãã gr. j

to be given cautiously, as once in every four or five hours. and in cases of hot dry skin sponging the surface with vinegar and water. with

plenty of crushed ice if thirsty. The patient should be allowed to sleep for this purpose we may use opiates, when the head symptoms do not contraindicate them, when those symptoms are present. Potas Bromid & Chloral are the best remedies. Stimulants should not be used in first stage, when they are called for later in the disease. Vino-whey, brandy and milk-punch seem to be the most efficient. When prostration is great Ammo. carbonat. is sometimes advantageously used. In the later stage when the tongue becomes dry and encrusted with lips & edge red turpentine may be had

recourse to, with good results. It is resorted to, on account of the peculiar influence it is thought to exert upon the surface of the alimentary canal. It should be administered in small doses, frequently repeated, from ten to twenty drops in mucilage or flax-seed tea every two, three or four hours according to circumstances. Turpentine stupes when there is tenderness with tympanitic distention, are very much resorted to, and according to the books, much good may be expected from the application of them.

In hemorrhage from

the bowels if not too copious may be rather salutary in their effect than otherwise, by relieving congestion, and thus the bowels are allowed to perform their function normally. if copious we must resort to astringents. Most writers I believe prefer vegetable astringents such as Kino. Extt. Rhatany. & Tannic acid. others highly recommend Acetat Plumbi. Sulphas Cupri. Nitrat of Silver &c. If Peritonitis should be lighted up, a complication, from which a large number of patients suffering from "Typhoid Fever" die, we must then use opiates and warm fomentations. The diet should be nutritious all.

through the course of the disease, consisting principally of Milk, rice-water, beef-tea &c.

The apartment should be comfortable and well ventilated during convalescence the patients bowels should be attended to, kept quietly in bed, and more substancial food allowed such as Beef Steak Mutton chops and game, if preferable.

In conclusion Gentlemen, I will say that this is my feeble effort of describing the nature, cause, the duration, the diagnosis, the prognosis and the treatment of "Typhoid Fever."

and hope that it may meet with your approval, and that I may be a successful candidate for graduation.

Most respectfully

Chas. F. Caines

Medical Thesis

on

Hygiene

Re[illegible] presented to the [illegible]ration of the Fa[illegible]
[illegible] "School of Medecine" [illegible] "University of M-d"

by

Charles C. McDowell.

in application for the deg[illegible]

Doctor of Medecine.

1871

In ancient mythology, Hygeia represents the [illegible] Goddess of Health, and the daughter of Esculapius, to [illegible] mind, a [illegible] and correct conception of the relation which he is said bear to practical medicine. For, as a daughter, she does not supplant the father, nor even occupy the principal room, but assisting him in his labors, and guided by his skill and experience, the good wife to seek the health and [illegible] of mankind is attributed. It is to be noticed that, to a great extent, the ministrations of Hygeia are [illegible], at least [illegible], sought, desired or [illegible] rewarded, but the physician is asked and expected to consider, with our skill and drugs, some of those evils which "flesh" is heir to, but which "flesh" earns and accumulates for itself. Be it, to satisfy the demand of a [illegible] population, and an inquisition [illegible] extinguished to drive away thoughts

of future penalties, seem to be characteristics of "human nature", which, however, the physician should, as far as it is possible, endeavour to correct.

There are seven hygienic consideration, which are, I think, of great importance, and which are more or less abused among all classes of people - and these I shall endeavour to discuss, although, from necessity, in a very cursory manner.

The importance of Food - no one doubts but proper feeding is practised by few, comparatively. Some persons seem to think that we "live to eat" and that the cravings of a perverted palate are to be preferred to those of an enlightened reason. Others think that the time spent in eating, is time wasted, and so they throw food into their stomachs, in the same manner that a steam engine is satisfied, pursuing journey - hurrier-skurrier, all in

[illegible] and

[illegible] — [illegible] to the [illegible]

[illegible], [illegible] the [illegible]

[illegible] salivary glands [illegible] all else that is

necessary. And also the [illegible], of [illegible]

[illegible] d [illegible]

[illegible] a [illegible], [illegible]

[illegible] the [illegible] — The very construction of the diges-

tive tube [illegible] the [illegible]

and the manner in which it should be eaten.

We have in the mouth, the teeth, which indicate that

the substances we are to eat are to be solids as

well as fluids — and then the compound motion of

the jaw, which we possess, shows that our food is

to be [illegible] the salivary glands at the mouth, indicates that

our food is [illegible] d [illegible]

[illegible]d as this requires time, time is a necessary element in proper feeding. Now, our food should [illegible] varied to suit our various conditions in life; the strong, healthy, hard-working man requires "strong" food; the sempstress and counting-house clerk, whose occupations are sedentary and monotonous and [illegible] [illegible] tax the powers of the mind or body, are able to digest only a "light" food and the sick man, whose tissues are undergoing rapid waste and whose strength is [illegible] failing, requires nourishment in a light and concentrated form, in order that his digestive organs, which share in the debility, induced by disease, may be enabled to appropriate it and at the same time be as lightly taxed as possible. And so we should endeavour to advise that food, which will be adapted to the varied circumstances of our different patients, [illegible]

[illegible]

[illegible] Air, for the [illegible], in the blood, of the oxygen of the air, is necessary, in order that the tissues may be enabled to appropriate the nutritive particles, [illegible]. Now, there are two great requirements to be met, viz: Sufficient air, and pure air, and neither can be said to have the pre-eminence, as both are absolutely essential to good health. It is a fact, universally known and acknowledged, that the inhabitants of cities are far less healthy, and their capabilities of resisting the power of disease less, than that of our "country people". This is, in a great measure, due to the fact, that in cities there are numbers of human beings, who are [illegible] in such narrow, and filthy

streets, and in apartments so small, that, sufficient air is an impossibility, and fresh air is not even to be thought of. And in these [illegible] are deeply rooted, those terrible epidemics, which spread their deadly branches far and wide. Many thousands of dollars are annually spent, in the ornamentation of our cities, with [illegible], and but a few hundred in the feeble effort to maintain the public health. Would that our "City Fathers" could but see the importance of legislating against narrow streets and courts and tenements [illegible] and all those forms of over-crowding which are practiced in our cities, and of supplying adequate means for the prompt and thorough removal of the city refuse, supplying the city with fresh [illegible] age - supplying public parks and squares in abundance, and doing those many little things, which

common observation, and common sense, would dictate! Then we would be able to point to our people in ruddy health, and in enjoyment of healthy minds, and healthy bodies, as nobler monuments than those of marble [illegible] Now, if pure air is so essential to the well, [illegible] from the effects of the poison of disease, can rapidly recover by having a second [illegible] in the [illegible] or vitiated atmosphere. We have had an example of this, furnished us by our own experience:- at one time typhus and typhoid fevers were quite fatal in our wards, and at the instance of our Professor of Physiology tents were erected in the yard and the [illegible] cases transferred to them, the result was a most happy one; for not a single case, treated in

the tents, died, but all recovered. Much more could be said upon this subject, the importance of which can not be easily exaggerated, but time and space forbid. Clothing is another matter, concerning which it would be well, if parents would heed the advice of their physicians. For the present fashions are, in many instances, refined cruelty. We meet, daily, the sweet, tender children, whose necks, arms, and legs are bare, and livid with the cold, and who are dressed, or rather undressed in the manner of a French, "the dear little things look so sweet". Our ladies, too, pay heavy tribute to Fashion, in the sacrifice of much health and comfort to her demands. The folly, and danger of these things it is our duty to explain and to endeavour, by our influence, to prevent. Cleanliness is a necessity and a pleasure, which, it is to be hoped, all may recognize and

enjoy, yet in our large public institutions, and hospitals, it is often practiced only spasmodically. As cutaneous transpiration is one great way in which the system relieves itself of certain excrementitious principles, personal cleanliness is of prime importance, that the function of the skin may not be impeded with. For this is injurious in two ways: first, other organs are compelled to take on a vicarious [illegible], in [illegible] to eliminated, and so are forced to overwork, and secondly, the function is [illegible] and the organism consequently suffers. In the hospital ward and in the sick-room the strictest cleanliness should be observed, lest the air become loaded with noxious effluvia, which reacting upon the patient will lessen his strength and increase the power of disease. All of the alvine and renal secretions of the

patient should be promptly disinfected and removed, and his clothing and bed-clothing which soon become saturated with the exhalations from his body, should be changed sufficiently often, to maintain as far as possible, cleanliness and purity.

Exercise is another element in hygiene which tends to health. It is one of Nature's laws that our mental faculties and physical powers are only to be healthful by exercising them, but in our own "fast" country the tendency is to over-exercise or to no exercise. Some rush, shriek, straining every fibre, with the cry that "It is better to wear out, than to rust out" and attaining a premature old age, drop into a premature early grave, while others look upon exercise of either mind or body, as an evil that is to be avoided if possible, and [illegible] are in the habit of [illegible] "[illegible]"

[illegible] efforts [illegible] the [illegible], [illegible]
So life, as an insipid thing, passes away from them
[illegible] they are "unknown and unwept" C,
[illegible] be evenly balanced, that we could strike "the
[illegible] medium" and indeed [illegible] to
be guided by it! Now, [illegible] it is necessary that
we shall exercise our powers, it is also necessary
that, when they have been exercised for a sufficient
length of time, they should then be rested - and the
[illegible] proper and natural way is, by Sleep. This is a
matter which is overlooked to a great extent, and al-
[illegible] it is true that some seem endowed with the
[illegible] of almost dispensing with sleep - as the Duke
of Wellington, who, it is said, slept two hours out of
the twenty-four - [illegible]
[illegible] seven to eight hours sleep is absolutely essential,
[illegible]

be prevented, if the demands of a tired brain, [illegible] were properly heeded, and many men, women, and children would be alive to-day, whom overwork has pressed into their graves. Cheerfulness is the last subject that I shall take up. Its importance no one will I suppose, question. For, to be well man cheerful society, cheerful surroundings and a cheerful home, act as stimuli, to counteract the depressing effect, which the cares of life have upon him. To the sick, then, they are of immense value, therefore, let everything in the sick-room be cheerful; plenty of sunlight, then admissible, cheerful pictures on the walls, cheerful attendants at the bed-side to minister to the wants, cheerful conversation, when it can be borne, and a cheerful physician, and not one, who by his "long face" and solemn air carries a-bout with him, the smell, almost, of the grave-yard.

A Thesis
On the
Diagnosis of the diseases of childhood
Respectfully submitted
To the
Faculty of the
University of Maryland
For the
Degree of
Doctor of Medicine
By
R. C. Buck
of
Virginia
Session
of
1873-1874

It has been the time honored custom for students of medicine to [illegible] with those who have toiled and striven with them so earnestly and [illegible] upon some subject belonging to the calling which they are about to take up. Medicine is a science so fruitful that the difficulty seems to be what to choose out of so great abundance that lies before us. After careful reflection I have concluded to take for subject of this thesis Diagnosis of the diseases that belong

[illegible] of [illegible]
[illegible] a theme that
a mightier pen than mine
might dilate upon without
exhausting and I will attempt
to give those only that an-
[illegible]
Who can look upon that
little blossom that lies so
[illegible]
feeling what a great respon-
sibility rests upon them. On
depends the prolonging of that
existence against which all
the powers of perverted nature
arrayed. And to watch with
the greatest vigilance the

[illegible]

[illegible] signs [illegible] by the untrained [illegible] diseases that [illegible] the kind of life is difficult to diagnose. If [illegible] I will endeavor to give the following [illegible] [illegible] [illegible] weakness is laid upon [illegible] [illegible] [illegible] of his complaint; but the [illegible] [illegible] will [illegible] sent elsewhere to [illegible]

that which cannot be expressed
[illegible] language [illegible].
And where does he turn to?
The Great Being who has
made all so perfect in natu[illegible]
has not left that which is
[illegible] it [illegible]
[illegible] tell us
in language that is unfail-
ing that all is not well
with them. Before taking up
the diseases in detail it wil[illegible]
be well to give some of th[illegible]
[illegible] being [illegible]
[illegible]cular classes of disease
[illegible]
[illegible] attention

These are not difficult to diagnose when taken as a whole. But to separate them is a task that will often worry an expert. The close observer will know [illegible] when he sees the child rolling his head about upon the pillow. When he sees it tossing its self about the bed. When persistant complaining is present. [illegible] contraction of eyebrows. [illegible] coming of the hand to the head. [illegible] of a restiration unconnected with

the pulse. The convulsions
dilitation of the pupils T
[illegible]
class of affections The diseases
[illegible]
They are the rapid wasting and
the stools which characterize the
various affections that come under
this this head are so simple
that I deem it useless to go
into a lengthy ditail of them
Those of the organs of respi-
ration and circulation manifest
themselves by Dyspnoea Rales
Dullness in percussion Cough
and the difference between the

[illegible]
case of Pneumonia. Three of
the circulatory system. Brain
[illegible]
[illegible]
will reverse the order and take
up the diseases of the digestive
organs first as they are of the
greater frequency and the
first that I will consider will
be Indigestion It a[illegible]
[illegible]
most that I will touch upon
I go beyond diagnosis and take
up Diotetics as the two are
almost inseparable If called
[illegible]

indigestion how would we diagnose it or how would we be sure that we were treating the right disease. The vomiting of great quantities of undigested food or caseum from the stomach unaccompanied with fever would enable us to discriminate between this and Cholera infantum as would also the absence of the great serous waste and the infrequency of the stools as compared with those of the latter disease. From [illegible] height of temperature and of [illegible]

of its appearance all of which belong to the [illegible] disease.
From Tuberculous meningitis which it somewhat resembles by drawing the finger nail across the thighs which leaves the depressed red mark that belongs to that disease as does also the Hydrocephalic cry. The two forms of Diarrhoea resemble [illegible] so [illegible] that [illegible] the frequency and character of the stools in latter disease [illegible] it [illegible] emaciation [illegible] leave no doubt in the mind. The presence of undigested food or fruit in

of these and [illegible] the matter that is common of them the primary [illegible] should be [illegible] in order to the diagnosis of this [illegible] common complaint.

Having pointed out the differential diagnosis between this complaint and those that most resemble it I will next take up Simple Diarrhoea.

The simplest cases that we meet with are not apt to be confounded with any other complaint except Enteritis from which it differs only in degree and the absence of inflammation. A high

fever should lead us to sus-
pect some lesion of the intes-
tine which we find present
in entero-colitis. The characte-
istic green stools of the simple
diarrhœa is a valuable diagno-
tic sign. The absence of
pain on pressure should also
[illegible]
[illegible] The [illegible] of distu-
tion (which its most constant
[illegible]) should also pre-
vent a mistake. The features
are not sunken to the same
extent as they are in Entero
[illegible] and Cholera-infantum
from Dysentery we could

distinguish it by the abs[illegible]
of lymina and tinem[illegible]
[illegible] (and the gre[illegible]
number) The presence of blood
[illegible] and
the jelly like appearance and
the smallness of them all of
which we find in the latter
[illegible] disease of the
above is Entero Colitis in
which the violence of the symp
toms are increased and we
find in the stools water serum
blood in small quantities in
which float the white and
yellow [illegible] that are almost
always present in the com-

[illegible]
[illegible]
[illegible] I
in simple and uncomplicated
d[illegible] [illegible] [illegible] [illegible]
I [illegible] [illegible] the shri-
eled skin. The remittant char
acter of the fever the great
emaciation, raked pulse all
[illegible]
I will take over the two next
[illegible] Dysentery and
cholera infantum the differen
ces which were sufficiently
described above I will next
take up Worms. These
beasts make themselves [illegible]

by the great nausea, itching at the lips, large abdomen, vomiting, appetite, hiccough, grinding of the teeth, costiveness. These signs we cannot rely on implicitly as they are present in other complaints: but must look to the fecesafter we will find the worms or their ova. The tape worm will not make its presence known till we find segments of it that have been passed from the bowels. The ascarides vermicularis will cause great irritation in the region of the anus and vulva. True and false croup

are peculiar to this period of life and are not likely to be confounded with any other disease except it be Diphtheria or Whooping cough. but [illegible] diagnosis [illegible] between [illegible] is a matter of some difficulty. [illegible] eliminate Diphtheria I can be told from it by [illegible] breath and of the swelling of the cervical glands. also of the clearness of the voice and [illegible] dubious cough which is never absent from bronchitis

True and false. From Croup
i.e. [illegible] of
the catarrhal stage of the
[illegible] and the second
ic cough of the latter.

True croup can be diag-
nosed from the true by i[illegible]
[illegible] [illegible]
[illegible] [illegible] [illegible]
of the voice between the par
oxysms which at times will be
but a mere whisper and the
absence of a remission of the
symptoms which we find
is the case with the false
variety. The next affection
of which I should speak would

be Diphtheria but as it is only likely to be confounded with [illegible] I will omit it with the exception of saying that it can be discerned from Scarlet fever to which it bears some resemblance by the absence of the strawberry tongue and the violent vomiting, as also the great height of fever, hot of skin and the characteristic rash which are the attendants of the last named complaint As we go down into the respiratory track pulmonary troubles

are next in order "Bronchi-
tis which are of two varieties
Simple and capillary
The complaints that this
most resembles is pneumon-
ia but we can easily diag-
nose it from that by the
disease Sputa of bronchi-
tis is rust colored as it is
in pneumonia but is streak-
ed with blood. The dysp-
noea is greater in bronchitis
than in pneumonia. The
rales of bronchitis are the
most constant, sibilant so-
nous and dry wheezes — the
of pneumonia are

most crepitant. Percussion is also valuable guide for in the ordinary cases of bronchitis we do not have dullness whilst in the latter stage of pneumonia it is most marked. The inspiration is also different for in the diagnostic signs of the latter is the great difference between the tone and the respiration. We do not find this to be the case in bronchitis. The dyspnoae however is greater in the latter. Pneumonia can be told from pleurisy

by the absence of vocal vibration sounds and of the characteristic stitch.

Having taken up the principal diseases and considered them. I hope that the reader of this will be lenient in his criticism of this crude attempt and also of the first of the author

Carey P. Buck

Thesis
on
Typhoid Fever
by
A. R.
of
Maryland

Jany. 20th 1874

This fever often manifests itself sporadically, or in few cases at once & frequently prevails as an epidemic. It is supposed not to be confined to any particular season, though as a general thing occurs most frequently in the Autumn and early winter, its invasion is slow and sometimes it is difficult for the Patient to tell when it first made its appearance. He complains of languor or a tired feeling, accompanied by loss of energy and especially in the morning a

feeling of dullness, the tongue is furred, with bad taste, very little appetite, sick stomach, sometimes vomits, in some cases a chilly feeling exists, with headache, depression of spirits, pain in the back, pulse quick and small, frequently tense and wiry. On waking from sleep a slight delirium follows. The Patient may remain in this condition for several days, not really sick enough to be confined to bed, yet not able from most uncomfortable feelings to give attention to daily duties. As the disease insidiously progresses, an increase of the symptoms will occur, the heat of the skin

increases, pulse quickens, head-ache becomes more painful, pain in the limbs, also great thirst and pain in the bowels. Diarrhoea ensues about the second week. The sleep is broken through the Patient seems drowsy during the time, the mind being often confused. The eruption which appears from the eight to the tenth day (not unfrequently later) is characteristic, consisting of small rose red spots, round and slightly elevated. Upon pressure they become dim. They are chiefly found upon the abdomen and chest, occasionally spread over the limbs and face lasting from

a few days to two weeks.
Eudamina appear upon the skin later in the disease, they are lenticu=
=lar shaped vesicles, appearing principally about the neck and axilla. The tongue becomes pale, after a few days it changes to red and is covered with a sticky mucous, again it dries and grows brown along the centre with a dark fur, soon becoming black, dry and cracking. a crust also forms upon the teeth. The bowels become loose and painful in most cases, about the second week diarrhoea begins. the stools are thin and watery and attended

with pain, usually dark coloured and offensive.
The stomach is tense, tenderness in the right-iliac.
Morbid Anatomy. The brain is often found injected with blood, the lungs are sometimes found engorged, stomach sometimes involved. Peyers glands in the small intestines and the spleen. When ulceration occurs the intestines are likely to become perforated.
Pathology Typhoid fever is considered by many to be a systemic disorder. Some authors think a predisposition ~~to the~~

to the disease exists - in certain persons -

Causation - This seemingly is a doubtful question - depressing causes are thought to promote it. unwholsome atmosphere, crowded houses, dirty apartments, bad water and indifferent food -

Prognosis - About one in twenty dies. When the bowels ulcerate, the case is very unfavourable -

Treatment - Upon first seeing the Patient, if the bowels be confined, use a mild laxative. While the fever is high, the tongue furred, the skin dry and hot - Blue Mass and Ipecac will often prove

very useful. The diet should be fluid. Beef tea is most frequently used. Also Rice, Milk, Wine, Whey, Milk Punch. Brandy given in small doses every few hours. Quinine may be given as a tonic. Cold applications to the head, and if the pain be very severe a few leeches applied to the temples. Sponging the surface of the body will often afford great comfort, using the precaution to uncover one side of the Patient at a time. Warm Whiskey and water are generally used for this purpose. When this rubbing process is performed in the evening

it frequently induces sleep.
If the abdomen be very tender the application of a large poul=
=tice of hot mush with a small quantity of mustard gives relief and comfort. And should the bowels become too free a few doses of opium, or some astring=
=ent should be administered.
In case of Hemorrhage from the bowels, an enema of lead and opium should be given.
When the Patient becomes rest=
=less, the abdomen tender, the tongue red and dry, with profuse diarrhoea, turpentine given in ten drop doses three or four

times a day will frequently prove very advantageous. The bladder must be closely watched, if reten-tion occur the Catheter must be used. It will be the duty of the Physician to watch closely the developing symptoms and treat them attentively and cautiously and to do all in his power which the occasion requires to contribute to the comfort and welfare of his Patient — and trusting in God for the result —

A R.

A Thesis

on

Pseudo Membranous Laryngitis,

Respectfully submitted to the consideration

of the

Provost, Regents, and Faculty of Physic

of the

University of Maryland,

for the

Degree of Doctor of Medicine,

by

Frank H. Gavin

of

Maryland.

AD. 1874

Pseudo membranous Laryngitis, or croup, is a common disease, and fatal, in a large proportion of cases. Its essential anatomical character, is inflammation of the larynx and trachea, commencing in the upper parts of the air passages, and extending into the bronchi. As a result of the inflammation, we have thickening of the mucous membrane, and an exudation which may become membranous, or purulent. The characteristic cough is sharp, harsh, and ringing; attended with difficult breathing; also the stridor inspiratory, sound. The voice is at first hoarse, gradually becoming extinct. Fever, loss of appetite and thirst, attend the disease. There is no pain in the affected parts.

Causes. Croup is especially a disease of childhood. It occurs most frequently between the ages of two and seven years. It is rare in adult life, and under the age of six months. Some children are more liable to it than others, and more than fall die of it.

Occasionally, an hereditary predisposition manifests itself. The most common exciting cause is cold. Thus children who live in heated rooms, and are taken out into the open air without sufficient covering, are apt to contract the disease. It is said to be common among the poor of N. York City, who live in apartments overheated during the day, and cool at night. The influence of climate, enters into the etiology of croup — the combination of cold and moisture,

with rapid albuminuria of compensation, convulsions & death occur. Sometimes, it is caused by the inhalation of irritating vapors, or the swallowing of corrosive liquids. It may be primary or secondary. It is not an uncommon complication of scarlet fever, and occasionally follows measles.

The pseudo-membranous laryngitis occurring in diphtheria, and which does not differ from it essentially, as regards its anatomical characters, is a form of secondary croup.

<u>Anatomical Characters.</u> The inflammatory action in this disease, involves not only the mucous membrane, but, in certain proportion of cases, the submucous cellular tissue also, causing infiltration, and oedema.

Sometimes, when redness of the mucous membrane persists after death, in other cases, the redness is found only in patches; occasionally it has happened that such a slight tint to be present almost the normal color. If the mucous membrane becomes thickened, a rapid proliferation and desquamation of its epithelial cells takes place, and an abundance of mucous pus, is produced. This disease, except in the mildest cases, has a tendency to spread farther than the lungs. More or less pharyngitis and tracheo-bronchitis accompany it.

The distinguishing feature of the disease, is the exudation of fibrin, and the formation of a pseudo membrane on the surface of the lungs. The result of this product varies different cases.

It may occur in small points or patches, usually, around the vocal-cords; or it may spread as a continuous or tri-mucous film, the epiglottis, into the bronchial tubes. It may produce but little or no stenosis. The lymphoid tissue, under the orifices of the mucipara follicles, and the depressions in the mucous membrane, while in a liquid state, does not coalesce, but, by means, as closely adherent, so to speak, to detached, or small pieces, by mophing. The disease does not confine itself to the larynx, but spreads to the oropharynx or fauces; as a result, we have pharyngitis, occurring, in a large proportion of cases. The formation of a pseudo membrane in the trachea is common. In almost one third of the cases of this disease, the bronchial tubes become implicated.

In those of robust constitution, the exudation is firmer than in those where exertion are reduced; then the fibrin fibrillation. After four or five days, the exudation begins to soften, from commencing decomposition. It commences at the mucous surface and progresses, and in favorable cases it is thrown off by the act of coughing, or vomiting. In fatal cases, the false membrane is rapidly superadded; so that in fact it takes place before the exudation when it is of great severity. In some cases, there may be imperfect inflation of the lungs, giving rise to deficient oxygenation of the blood. Pneumonia, is a not infrequent complication of the disease.

Symptoms. The symptomatic phenomena in this disease, are the same at the onset, as in

ordinary outward symptoms. It is often
supposed to be nothing more than a common
cold. One of the earliest symptoms, depending
upon the extent of the laryngeal inflammation,
is the cough: this is hoarse or barking.
The voice is hoarse or husky, and there is
moderate febrile movements. Days or three days
may elapse before the separation is indicated
by such an extent as to excite apprehension.
The amount of expectoration depends on the extent
of the bronchial inflammation. If the disease
extends no lower than the upper part of the
bronchi, the sputum is scanty. The scantiness of
the sputum lessens the risk of life, as does the
obstruction in the larynx, allows [illegible] exist
and [illegible], as well as the alteration of the patient.

small portions of pseudo membrane, and sometimes indeed, complete casts of the larynx and trachea, are expectorated with the mucous pus.

The respiration is accelerated at the onset, but it becomes slow in the advanced stages.

The infra-mammary region is depressed, at each inspiratory act, sometimes a portion of the pseudo membrane becomes detached, and, doubtless, in itself, causes intense suffocation. During the paroxysm, the child tosses himself from side to side, stretching his arms, and pleading, as it were, for his mother or nurse.

The pulse is comparatively quiescent during the intervals, but the respiration is constantly so parvous. The frequency of the pulse varies, in proportion to the extent of the inflam-

and stage of the disease. At the commencement, it varies from 110–120 beats per min.

It is most frequent during the course of the disease, and towards the close of life is feeble.

Now and then, a patient experiences a marked remission in his symptoms, due to the relaxation of the pericardium produced. We should be both hasty in giving a favorable prognosis in these cases for the pericardium is apt to be reproduced in a few hours. If the stethoscope is placed over the carotids, the loud systolic and diastolic sounds are heard, which are caused by the obstruction.

In some instances the sounds are audible over all parts of the thorax. On auscultating over the chest, we have either the vascular murmurs,

or, more frequently, the common, and often with most stable, due to extending bronchitis. Pneumonia is indicated by dullness on percussion over some part of the chest, and bronchial respiration. Recovery from croup is gradual. Fatal cases, may terminate from two to three days. Sudden death in a paroxysm, may be caused by the detachment, of one or more of the false membr, and its falling on itself. Sometimes death is due to a collection of mucus in the trachea and bronchial tubes, which is not spontaneously coughed by the presence of the pseudo membr and the feeble expiratory efforts of the child.

<u>Pathological Anatomy</u>. Croup is essentially an inflammation of the mucous membrane of

the larynx, with a peculiar element the fibrinous exudation. It is common for pharyngitis, tracheitis, and bronchitis to exist with, or without, the pseudo membrane.

The chief danger in the disease is the impediment offered to respiration, by the presence of the false membrane. A neuropathic element exists in many cases, but is not so marked as in spasmodic laryngitis. It is believed that the inflammation induces a spasmodic contraction of the vocal cords, hence the impediment in the breathing during sleep, and during the muscular relaxation immediately preceding death, when it occurs in the usual manner. Death is always by apnoea.

Diagnosis. Ordinarily the diagnosis is easy. Spasmodic laryngitis, is the disease most likely to be confounded with true croup.

The chief points in the differential diagnosis are the following; viz. the one, commencement, gradual, in the other, abrupt, and at night; presence in the one, absence in the other, of a pseudo-membrane upon the surface of the fauces; fragments of fibrin in sputa of one, absence in the other. Course of the disease proving, gradually, worse in the one, in the other a disposition to rapid improvement. The diagnosis between true croup, and laryngismus stridulus, & esp. Laryngeismus stridulus is purely nervous. The cord is only irritable, causing great dyspnoea, without the true membranous crisis of croup; the attack ceases in the super-

ontis of muscular relaxation. Foreign bodies
in the throat, or glottis, may give rise to symptoms
which might be mistaken for croup; but,
the sudden manner in which the child is
seized, most likely while at play, or while
in apparently perfect health, will be sufficient
to assure us of the non existence of the affec-
tion, which always has a premonitory stage.

<u>Prognosis</u>. The tendency of the disease is to
a fatal result. According to the statistics of
Dr Ware, nineteen out of twenty, die.
The mortality is no doubt less in those com-
pletely treated at an early period.
The favorable prognosis is indicated by a
softening in the tone of the cough, by the less
frequency or severity of the attacks, by a less

distress in breathing, a return of the voice to the natural tone; loose and moist sound of cough, and presence of expectoration. If the improvement continue for twelve hours, we may expect a decline of the disease.

If the paroxysms are more frequent, and violent, and the dyspnoea is not diminished; if the voice is suppressed, and the cough less powerful; if the expansion of the lungs is reduced till the cheek bones are retracted, or flattened, all hope of a favorable change takes place, must be abandoned.

If the patient recovers from croup, there often remains a tendency to bronchitis or bronchio-pneumonia, which require special treatment.—

<u>Treatment</u>. The success in the treatment of this disease, consists almost entirely in the adaptation of a thorough, "antiphlogistic" treatment, at the very onset. If the disease be recognized, and judiciously treated at the very first stage, the chances of recovery will be vastly greater, than if it be treated for three days after the onset. As the danger arises from the presence of the false membrane, the indication is to prevent its formation, as far as this is possible, and to aid in its removal when formed. Can we prevent its formation? Mercury we know has the reputation of diminishing the plastic of the blood; for this reason we use it in the following way — R. Oly. Olivæ: Ext. Glycyr: mitis: fiat ℥ss. to be given every hour or two, with

croup. Emetics, held a conspicuous position in the treatment of croup; but their injudicious use is, at least, as much harm. The depressing emetics should not be given after the second day, nor in the course of secondary croup in connection with measles or diphtheria. Emetic treatment, in the commencement of this disease, is no doubt beneficial. It promotes secretion of mucous, which is emollient. It tends to wash the larynx, of fibrinous and albuminous products, still in the diffluent state, and which, if allowed to remain, would form a pseudo membrane. It exerts a sedative influence on the heart, thus diminishing the afflux of blood to the larynx, and in this way decreasing the inflammation.

The best emetic is the yellow sulphate of copper, in doses of two to three grains every fifteen minutes till vomiting is produced. When we wish to produce a slight relaxation of the septum, we may use the prescription, ℞. Specac: pulv. Alum ʒj—. The inhalation of steam, is a very important part of the treatment in this disease. A temperature of from 70°-80° is well tolerated if the atmosphere is loaded with moisture. Lately the spray of hot-water has been used, under the belief that it exerts a solvent effect on the fresh membrane.

There is considerable difficulty, attending the administration of the spray, in case of children affected with croup. It is recommended to add a few drops of metabisulphite

lime, to the water used for the production of steam; the lime flakes, and the minute particles rise with the vapour, and in the air pipe, thoroughly impregnate the atmosphere. A period arrives when it becomes necessary to remove from the air passages, mucus, pus, and small pieces of pseudo membrane, which may have become detached. For this purpose, we may use, Sulphate of Copper, Sulphate of Zinc, Sulphate Mineral or Alum. The action of the inhaler may be promoted, by a tumbler of warm water. After a few days, if the patient lives, the pseudo membrane has a tendency to separate, owing to commencing decomposition, and to the mucus and pus, collected beneath it. The vital powers should be sustained, in the

that the cough may have force to throw off the substance as soon as its fibres of attachment have become sufficiently loosened. Cold water is not well borne, but concentrated liquid nourishment should be used. If there are signs of exhaustion, we must use alcoholic stimulants. Local treatment should not be neglected. A compress of one or two thicknesses of linen laid on the throat of the child, and kept constantly wet with cold water, is a mode of treatment, considered by many of the greatest value. Topical treatment of the fauces and larynx, has been recommended in the choice. Nitrate of silver is the agent used. It does not dissolve, but contracts the membrane, and in this way, perhaps, aids in the detachment.

A part of the good effect, if such result is, perhaps due to the mechanical effect of the purging, and which the opposition. The Liquor Ferri Subsulphatis, Carbolic acid, and Bromine, have been used and recommended. Since Croup, in a majority of cases is a progressive disease. Office we have exhausted all the known resources presented by medicine, without succeeding in arresting the disease, we must resort to surgery, and perform tracheotomy. The majority of those operated on die; but some live who without the operation, would in all probability die. Of those who die after the operation, a large proportion die of [illegible] usually, especially, caused some thinks, by the air entering the

bronchial tubes before being warmed by the passage through the regular canal. Some again attribute this effect to the irritation of surrounding parts by the canula pressing upon them.

After the operation, the apartment in which the sufferer is placed should be constantly kept at from 80°–90° Fahr., and loaded with moisture. Constant attention should be given to the canula, to prevent its being filled with mucus & pus. No medicine is required after the operation. A diet of the most nourishing character, should be given in a liquid form. After a few days, when symptoms abate, the aperture may be closed from time to time, in order to ascertain the condition of the larynx,

whether or not it be free from obstruction.

If bronchitis or bronchopneumonia supervene, they should receive special treatment.

Isaac D. Irwin.

Thesis

on

Colica Pictonum.

Respectfully Submitted to the

Faculty of Physic

of the

University of Maryland

for the degree of

Doctor of Medicine

by

Wickliffe Frierson

of Columbia

Tennessee

A. D. 1874

Colica Pictonum.

This disease has been described under many names by various writers - as. Colica Pictonum Colic of Poitou. Painter's Colic Plumber's Colic - Rachalgia - Dry - belly ache - Lead - Colic &c. all of which refer to the poisonous effects of lead when introduced into the system. The affection differs from ordinary Colic not only in its Clinical history and causation but also in its pathological character - Lead Colic is a complication of neuralgia with partial palsy of the bowels - The effects of Lead poisoning are developed in a gradual

manner as it is generally caused by the continued introduction of small quantities of lead into the system generally before we have any localized pain. Prodromata phenomena may be observed as metallic taste in the mouth - pallor from anaemia - sclerodermia of the skin - fetor of the breath - constipation - emaciation & muscular debility - When at length we have pain in the belly it is slight but as the disease progresses it becomes the chief cause of ailment - The pain is most generally referred to the region of the umbilicus - but may be present over other parts as the

Epigastrium. Hypogastrium or over the whole belly & shooting pains may extend to the back and elsewhere - but the pain is generally localized over a small spot. In a slight attack the pain may not cause more annoyance than an ordinary Colic but when the attack is severe the suffering may be intense - the countenance of the patient is anxious & despondent - the abdomen may be tense but is generally depressed and resistant to pressure caused by the contractions of the abdominal muscles and not unfrequently drawn into knots - the bowels are obstinately constipated though there may be

frequent desire to go to stool & much straining - The dejections from the bowels consist of hard dry lumps or scybala usually of a pale-bluish color - The pulse is slow & great from sedative effect on the heart & a very constant though not always present symptom is the blue line on the gums first noticed by Dr Burton - it is a blue or purplish line running along the gums just where they meet the teeth. This bluish discoloration is caused by the chemical reaction between the solution of lead in the tissues and the saliva - the saliva containing the sulpho cyanide of lead

The coloring matter deposited is the sulphuret of lead. The reason why it is found just in this locality is that here we have the tartar deposited which being very porous furnishes a nidus. a proof of this is furnished by the fact that where a tooth is absent there we have no bluish discoloration.

It is also sometimes wanting in individuals who use the brush upon their teeth regularly and in such persons its absence would not be evidence that they were not laboring under the poisonous influence of lead. This discoloration has also been noticed upon the mucus mem-

bones of the cheek & lips — The abdominal pains are not inflammatory and are caused by distention which is due to the paralyzed condition of the bowel — Pressure if made upon a large portion of the bowel is well borne and gives some relief — The patient suffering from lead colic is generally found lying upon his belly with a folded pillow under him or pressing upon his belly with the palms of his hands — The gums are usually swollen & the urine scanty and high colored with painful & difficult micturition — From the collection of gas in the intestinal tube tumors that change their po-

sitions are observed — The pains may occur in paroxysms exclusively or as is more generally the case pain though in less degree is present throughout the attack — The duration of the paroxysms vary as also do the intermissions and remissions from a few minutes to hours and even days During the whole time in uncomplicated cases there is no febrile movement. The pulse is slow and irregular and harder than in health The skin is cool & the failure of the strength is in proportion to the intensity and duration of the attack. The attacks have no definite duration

if removed from the cause will of themselves get well in a week or ten days but if continually exposed to the exciting cause may last for an indefinite time

Lead colic in itself involves little or no danger to life but when the patient is continually exposed to exciting cause may lead to more serious disease - The first attacks of lead colic are usually well recovered from - The obstinate constipation has been overcome and the pain in the belly relieved - When the patient is apt to return to his former occupation when he is likely to bring about successive attacks - after several

attacks - either during the last or immediately after the last - the patient finds that he has suddenly lost the use of the extensor muscles of his forearm - wrist drop - The lower extremities are also sometimes affected and in the later stages of the disease there seems to be general muscular debility which is evinced by his tremulous movements especially of the tongue when protruded - The nerves of sensation or motion separately or conjointly may be affected and in different degree, and frequently accompanied with neuralgic pains very much like rheumatism - These are usually continuous and liable to exacerbation - an

increased by motion and relieved by pressure. This muscular paralysis is followed by waste and atrophy of the muscles that are affected - especially in the bundle of fibres composing the ball of the thumb. The muscles affected do not correspond well to the Galvanic Current. Nor is there pain or any unpleasant effect elicited by such application. Sometimes later in the disease the patient having previously suffered both from Colic & palsy the brain becomes affected - which is a very serious complication indeed. The symptoms are delirium with convulsions like epilepsy - complete blindness impaired sense of hearing - diminished sen

-sibility - delirium - Stupor & Coma - close the
Scene - Clinical history -
Of persons
affected those that are most exposed to
lead are most subject to the disease
- as painters - artizans in lead - type
founders. type sellers & c - Though
there is great differences in individuals
to the susceptibility of the lead - painters
are sometimes work in lead for a very
long time before they are affected - While
Cases of lead poisoning have been brought
about from sleeping for a few nights
in newly painted apartments - Ladies
are sometimes affected with lead poison
ing from the employment of Cosmetics Contain-

ing lead. Whole neighborhoods have been poisoned from drinking water conveyed through leaden pipes. Dr Wood mentions the case where poisoning was caused by drinking the 1st glass of Soda from a fountain for a long time. The Soda water having stood in the leaden pipe proceeding from the fountain had become impregnated with the noxious substance.

Mode of operation of the lead. The preparations of lead are said to operate by direct contact with the parts affected. being first absorbed by the blood & distributed to the tissues. By chemical analyses

made by Tiedemann, Gmelin, Orfila & other Chemists the metal has been detected in the blood, urine, milk, brain, spinal marrow, bones, liver, spleen, kidneys and in the coats of the stomach, bowels and gall-bladder — How long it may remain in the system is not known. Orfila found it in the liver, intestinal coats and bones of an animal eight months after it had been taken — The system has the power of throwing it off sooner or later if it do not exist in sufficient quantity to destroy life — It is eliminated by the skin, kidneys, mammae and probably by all of the excretory organs — In its action on the nerves, it is thought to act

by entering directly into the nerve substance
— In lead palsy the reason for it's af-
fecting the extensors only and generally
in the right hand — has been given
that the solution of lead exists in
the blood and as these are the mus-
cles most used by the painter — so you
have greater flow of blood to the part
and as the blood is impregnated with
the lead consequently are more apt to
be poisoned — A better reason seems
to me that the hand and arm of the
painter while painting are most exposed
and as the paint drops the poisonous mat-
ter may be absorbed or in this way brought
in direct contact with these vessels.

Morbid Anatomy - In poisoning from lead colic, parts of the intestine are found to be dilated while other parts are contracted. The contracted portion is the natural state & the dilated portion is the relaxation or result of the paralysis - The affected muscles are pale and lead is found throughout the system in form of carbonate. Sequellae - Kidney disease following lead poison is more common in Europe than in this country. One half of the painters of London are said to die of kidney disease. Albuminous urine appears in the decline of the disease reason

being that at this time the process of elimination is going on — Gout is of frequent occurrence with those who work in lead — Lead has the power of preventing the elimination of Uric acid

Treatment — In the treatment of an attack of Lead Colic the objects in view should be first to alleviate the patients suffering & secondly to remove the morbid material from the blood and tissues — If the attack be acute and the patient suffering he should be treated by emetics — Cathartics and warm fomentations & opium hypodermically to relieve pain

should the case be chronic treat with sulphuric acid & the sulphur bath - The bath acts by converting any selenium of lead that may be near the surface into the inert sulphuret & thus prevent further absorption - After the bath the patient will be found to have deposited on his surface a dark deposit which should be washed off with soap & water with the free use of the flesh brush - Cathartic doses of the sulphate of Magnesia should also be given - Iodide of Potassium is a valuable and useful remedy if given in the decline of the disease - It acts in stimulus -

the Iodide is absorbed in the blood and thus comes in contact with the particles of lead in the tissues and by combining with them makes them soluble so that they can easily be eliminated by the Emunctories - But should it be given while there is a large portion of lead both in the blood & in the tissues the amount made soluble from the tissues in addition to that already in the blood may give rise to acute lead poisoning

The Sulphate of Alumina & Potassium is also a valuable strength old remedy in this affection. It acts by stimulating the partially paralyzed

intestines & increasing peristaltic action. In bad palsy besides the remedies above mentioned efforts should be made to restore the muscles to normal action and this can best be done by the use of the Galvanic battery three times a day — Cerebral symptoms are beyond the scope of medicine — If delirium be present apply cold to the head & blisters — Advantage may also be gained by the cautious administration of opium The existence of implication of the kidney is made evident by tenderness over the kidneys. Cups wet & dry & warm fomentations give some relief. After an

attack should the patient be again exposed to the same influences is apt to have a recurrence of the disease. So it is better for him to change his employment when there will be no likelihood of a relapse — Persons who work in lead should pay great attention to cleanliness & to the washing of their hands. especially just before eating.

Nicholas Frisson

Baltimore Dec 25th 1873

1874

A
Thesis
on the
Pathology of Phthisis Pulmonalis,
Submitted to the Medical Faculty
of the
University of Maryland
for the
Degree
of
M. D.
by
Samuel Rowland.

Pathology of Phthisis Pulmonalis.

Respecting the opinion of pathologists upon this disease, probably all regard it as a constitutional affection, and the local manifestations or products presented in ulcerations lung, as the expression of a certain cachexia or dyscrasia either inherited or acquired; and furthermore many admit a previous inflammatory condition of the lungs to be determinative to a more or less extent of this abnormal deposit; but in reference to the anatomical character, precise nature, and source or etiology of these deleterious products, no definite conclusions have been reached.

If we refer to the medical history of the past as throwing light upon this subject, we notice views advanced, explanatory of its nature, contradictory of each other respecting the pathological character of the local productions in the lungs; and also even theories held in opposition to the essential cause of the disease being disseminated throughout the system. As this affection presents two different local products for consideration - the gray or semitransparent

granulation and the yellow cheesy tubercular matter; it will be our province to inquire into the views deduced by pathological investigation explanatory of their seat, nature and causation, the connection existing between them and an inflammatory condition of the respiratory organs, and finally to consider the relation in which they stand to a morbid state of the system at large.

Formerly, comparatively little advance was made upon the pathology of phthisis, until about the time of Laennec, who looking upon this disease as primarily and essentially constitutional in origin, and in every way independent of any form of inflammatory action in the lungs as an exciting cause, regarded the gray tubercle as the local anatomical characteristic of the affection; or in other words as a deposition from the blood of certain vitiated ingredients; maintaining that all the different abnormal elements seen throughout the course of the disease, were simply modifications in some form or other of this semitransparent granulation —.

This theory excluding the yellow tubercular matter as in any manner an essential anatomical element under any form of pulmonic trouble, and also inflammation as causative or determinative to any extent of the local deposition, was naturally met with opposition; chief of which was that advanced by Broussais, the great exponent of inflammation, who regarded these productions as seated in the lymphatic system of the lungs: in fact a deposit from the lymphatic fasciculi, resulting from inflammatory action as a determinative cause. Other views received with much less favor by the profession, were also about this time advanced. Thus some have considered these products as consisting of matter secreted by the bronchial mucous membrane; others have held them to be exuded fibrin as caused by the rupture of minute blood vessels, and remaining as a local irritant after the absorption of the more liquid contents; others have allotted to them the state or condition of induration and

hypertrophy of the pulmonary vessels; others again have attempted to trace their origin to the cellular membrane as found throughout the body; and lastly even the idea of an hydatid origin has had its supporters. Of these different aspects those which most comport with later investigations upon the pathology of the disease, are the opinions of Lannec and Broussais: or at least one of the conditions as held by the last mentioned pathologist, in reference to inflammation as an exciting cause; for if we adopt the opinion of the former we would naturally expect at a certain period of tuberculous deposition, inflammatory action to be set up; and also with a great degree of plausability may we think a determination of abnormal elements to the site of a previously existing inflammation would take place; for it would apply to a general law of pathology, "Ubi irritatio ibi afflux". Moreover this condition would much more certainly be brought about, if absorption as a reparative process in such an

inflammation had been checked, retarded, or in any way inadequate to the complete removal of the effused product. This idea of a lymphatic origin set forth by Bouisson, seems to consider phthisis and scrofula to be one and the same disease under different manifestations, and later investigations may still throw light upon these subjects and show the relation, if any, existing between these two affections, or deny their similarity by showing the pathological lesions produced by scrofula under the domain of the lymphatic system as their seat: or if not, at least establish the exact nature of a form of phthisis now regarded by many as strumous pneumonia. Coming now to later opinions upon the nature of the tuberculous productions, we witness a marked improvement in the means for pathological investigation, and also in the facts deduced therefrom; for of late scientific inquiry has done much to narrow previously conflicting theories, and reduce them to a much smaller compass; and thus has pathology, by

excluding all matters not essentially primary elements of the disease, succeeded in reducing all the forms of phthisis, hitherto the subject of dispute, to the two principal forms of first, acute or chronic pneumonic phthisis, and second, acute or chronic tuberculous phthisis; but still so far as definite knowledge exists upon the precise nature of these varieties of consumption, they can not be considered as satisfying all the ones hitherto advanced. Having first considered the connection existing between the gray and yellow tubercle, we will next inquire in what relation they stand to the two forms of phthisis thus adopted, the connection, if any with a scrofulous diathesis and lastly the constitutional state as causative of, or [illegible] affected by or during the existence of these elements in the lungs. Pathologically considered, the gray tubercle presents itself as a semitransparent body, differing in size and appearance at different stages of the disease. It is seated in the interstitial tissue of the lungs, often adhering closely

to the vesicular walls; for so far post mortem examinations and microscopy have not detected it's presence in the cells themselves. It contains granules with nuclei and nucleoli; and by most pathologists is supposed either to be a result of abnormal growth of homologous elements deposited from the blood, or of some modification in their developement, or else to the fact that they being normal are deposited in a wrong situation; or furthermore as natural organic principles of deposit, lacking one or more elements essential to cell formation and developement, and as a consequence thereof mal-assimilation, ending in a different anatomical formation to that which is normally present and constitutes the connective tissue. The yellow tubercular matter is seated in the pulmonary alveoli, either in the form of round insulated masses, or else existing in a state of infiltration. This differs principally from the gray in the fact that it is destitute of nuclei or nucleoli, and also in it's

gross appearance. From the chemical test showing it to be rendered transparent by acetic acid, is afforded some evidence of its dependence upon an inflammatory condition. Chemically these two products are principally composed of albumen, holesterine, and certain earthy salts as the phosphates and the soluble salts of soda. Viewed microscopically, they are of course homologous in their nature, the doctrine formerly held us to an heterologe of principles being discarded by pathology. Besides these elements other varieties of morbid material are found in the lungs, but are most probably the result of degenerative changes of one or both these elements, together with the tissue undermined and broken down by the chronic inflammation resulting from their presence. After a variable period, unless the patient should die from acute phthisis by the immense accumulation of miliary granulations sufficient to compromise respiration, these productions undergo change, probably from some inherent-

acting cause within themselves, and from absorption of liquids from the neighboring parts; and are finally converted into a mass having the appearance of pus; which microscopy shows to consist of such elements as leucocytes, tuberculous corpuscles, fatty granules, epithelium from the bronchial membrane, blood crystals, granular matter and fibres from the structure of the lungs. Sooner or later these masses are thrown off leaving vomicae; these different processes constituting the local manifestation of the disease. Now while many pathologists have denied that a metamorphosis takes place, whereby the gray tissue is converted into the cheesy matter, others hold this to be the only true process within the development and casting off of these abnormal productions. Virchow looking upon the gray matter as due to a proliferation of connective tissue cells, regards the second as an advanced stage of, or the result of a process of fatty degeneration of the true type, and which process together with the elements of lung structure disintegrated,

is the true and only pathological nature of the local expression. This of course must presuppose a primary depraved habit of body, and also a state of some form of pulmonary inflammation of a low grade from the evidence presented by the expectorated matters. Robin thinks the gray tubercle to be a cytoblastion, which as he says, really exists in health; but through some fault of innervation influence or by irritation in the part, undergoes hypertrophy, with the after results. Now in certain instances we know that the yellow tubercular matter presents the appearance of pus, though in a much more consistent state than is generally observed; and this without any appearance of the gray tubercle. This would seem to indicate the probability of a distinction between the two: for besides this so far as microscopical investigation gives us any clue to their relation, the changes that were previously supposed to follow the deposition of the gray matter as existing primarily in the tissue before any appearance of the

yellow tubercle, are not in fact fully demonstrated; and furthermore the association of the two in the same lungs at the same time is still doubted by many pathologists. Therefore we can only demonstrate the existence probably of the one, upon the supposition that the softening and breaking down of the deposition, has so altered it's normal identity or appearance as to render it unrecognizable in gross appearances, and also under the microscope, of having qualities in common with the cheesy tubercle; and as this is a judgment founded on insufficient facts, no accurate conclusion can be deduced therefrom, until later research shall clearly establish the hypothesis as a known pathological law.

Again, regarding the yellow tubercular matter as a result of inflammation, microscopy here endeavors to establish such an identity by affirming that the product of inflammatory action much resembles in appearance this matter. But the state of the lungs when attached by inflammation

seems to controvert this by showing that the products resulting from inflammation are generally absorbed in toto, while this is just the opposite characteristic in the behavior of the yellow tubercle; which remaining as a foreign body in the pulmonary alveoli, by the irritation therein induced by its presence, or from some exciting cause independent thereof, causes chronic inflammation, softening and destruction of the surrounding parts. Now in such cases of inflammatory action, bronchial or pneumonic, may not the conclusion be doubted that in all cases the effused matter is not wholly absorbed, and may not one form of phthisis be developed upon or immediately after an existing inflammation, especially in subjects having an hereditary or an acquired predisposition to the disease?
With much more certainty would clinical evidence corroborate this we think, if such an inflammation had existed in a subacute and particularly a chronic form, which, by continually exuding altered secretions or elements, would

more effectually resist the reparative processes, and be a great incentive for a determination thither of vitiated principles in the blood. If we regard the two anatomical features of the disease as distinct it seems probable there might also be a deposit from the capillaries of the gray tubercle into the pulmonary vesicles; especially so if we could suppose the deposition of the yellow tubercle as already having taken place, and acting as a nucleus, or at least the part of a determinative cause; for from the anatomical character and relations of the parts, it is natural to expect an abnormal deposit here, even as a result also of inflammation of the catarrhal type; unless we regard the gray matter as only due to or being a form of cell proliferation or a cytoblastic hypergenesis. If this condition was supported by clinical investigation, then the supposition of the gray and yellow tubercle existing at the same time and in the same mass could be more easily appreciated. Again from this supposition, assuming the identity of these two products, were the

gray tubercle ever deposited here, there in the presence of different physical and chemical influences, it would become so metamorphosed, or at least altered in character and microscopic appearance, and from this process might constitute and receive the designation of yellow cheesy tubercular. Aside from all these theories, it has been quite clearly shown that consumption may be developed after an inflammation of the lungs or of the catarrhal variety, and throughout the stage of the disease, the expectorated matter, if not identical with, at least resembles the yellow tubercle, irrespective of the fact of the preexistence of the gray tubercle.

Interstitial pneumonia as distinguished from the catarrhal and croupal forms, may also stand in the relation of an exciting cause to this disease, from the pathological elements of the inflammation remaining in the areolar tissue and undergoing degeneration; or by the irritation their presence induces, bring derivation of a deposit and accumulation of abnormal principles; or perhaps from a malposition of certain mor-

mal elements; or lastly this lymphomatous product may take on proliferation and then by induce inflammation of the adjacent pulmonary structure, and finally be attended with all the manifestations and symptoms of a regular course of phthisis; for should the abnormal product be thrown off, the irritation remaining is still sufficient to determine tuberculous matter in a system favorable to such a result. This idea of a lymphoma as causative of phthisis has lately been considered more exciting of the affection than was ever before supposed. What has hitherto been advanced in reference to the relation between this affection, naturally suggests another inquiry — the connection if any existing between phthisis and scrofula. A form of consumption entitled strumous pneumonia is now thought to be very frequently the pathological nature of many cases heretofore classed under the common designation of phthisis.

This theory if fully confirmed, will exhibit the great tendency on the part of scrofula to a destructive process, form a

provocative cause, or will establish the close relationship with phthisis, if not identity. This form of phthisis develops itself during or after a catarrhal inflammation of the lungs, and often runs through its stages without any evidence of the gray tubercle: though whether it be the result of the same primary cause acting, or of the strumous diathesis as distinct from the tubercular, no conclusive evidence has been afforded. Clinical evidence has not fully corroborated their similarity, though by many of the profession they are considered as results of the same disease, the acting cause manifesting itself in various ways. Now they differ generally as to the site of local expression and time of deposition; and if they are identical and originate from the same dyscrasia, we can assign no reason why they should not appear simultaneously as to time and situation, and why the general tendency of our despite all therapeutic measures, is to the destruction of life, and why the

should be more amenable to treatment. Age has much to do with their development; scrofula mostly manifesting itself in very early life, while tubercle generally between the ages of twenty and thirty, though liable to appear at any age. Moreover it is a clinical fact that in a subject previously affected with scrofula, or who presents the cicatrices resulting from the disease in early life, tubercle is rarely developed, or at least not in a greater degree than in one previously unaffected; scrofula thus appearing to have a protective influence upon the life of the individual by exhausting as it were the morbific germs. Also to the difference in situation may not in early life some inappreciable condition of certain structural elements of the body favor a deposit in the cervical glands in preference to the lung tissue, which as yet is not prepared for the reception of morbific germs?

In support also of their identity, the behavior of these two products when deposited in the tissues is the same, the processes set up in the part by their presence are alike, the anatomical changes correspond, both

being converted into a caseous matter, due according to Meinecke, to hyperplasia, resulting in irritation and finally inflammation induced by their presence. They may also be reduced to a state of fossilization by the absorption of the organic and it salts. Their identity is furthermore strengthened by the fact that during a regular course of phthisis, various glands in the body may be affected, similar to what occurs in scrofula alone, as the mesentery, which often, under the title of tabes mesenterica, would be sufficient to destroy life even though the lungs were still free from deposit. Therefore, practically these may be looked upon as an evidence of the same constitutional cause acting under different manifestations, and different periods of life.

From the fact that phthisis is generally determined to the lungs in preference to other organs of the body, the state of the tissue, the character of the circulation; that here is the seat of such an important change in the elements of the blood - the expulsion of water, carbonic acid and effete matters and absorption of oxygen, and moreover their proximity

to the external air through the accessory organs of respiration, and as a consequence thereof, exposure to the vicissitudes of the atmosphere — all seem to be more or less instrumental in lowering their vitality and rendering them a more easy prey to the ravages of disease. This affection is also principally confined to the upper lobes of the lungs and, with such little difference of frequency of one lung being affected more than the other, that pathologists do not make any distinction, as was formerly entertained. Some have supposed that, from the immovable position of these upper lobes, the circulation is more retarded and therefore more favorable for a deposit; while others have considered it due to the greater amount of connective tissue there situated. Now both of these causes may have some influence in determining an exudation of the gray tubercle to the connective tissue; unless we simply regard this as due to proliferation of that tissue; for in

pneumonic inflammation, the exudation takes place at the base of the lungs, perhaps as a result of their more depending position; but especially to the exalted circulation there induced by the constant movement necessary to inspiration. Here the blood only exuded to a small amount into the interstitial tissue from its being sparse and more closely adherent is in a great part, or often wholly transuded into the pulmonary bronchi. During organic cardiac disease and emphysema, tubercle is rarely developed in the lungs, these affections acting as protective agents, most likely by expanding the capillaries and vesicles and diminishing or in some way modifying the state of the tissue whereby the tuberculous matter is prevented or retarded a deposit. This prophylactic action of these diseases exemplifies the much greater tendency of phthisis to manifest it's action upon the lungs, as it is fair to suppose that in many cardiac or emphysematous affections, the tuberculous diathesis is dormant

in the system. Admitting as a clinical fact that phthisis may present itself under an inflammatory, pneumonic form, this in no manner militates against the belief of a primary morbid condition of the system at large.

Thus we witness its fearful ravages upon various organs and tissues of the body, sufficient in this respect to destroy life, were not the lungs, as is generally observed affected at the same time. It attacks the pericardium, peritoneum, pleurae, intestines, brain, and nearly every organ and tissue of the body, no evidence having yet been afforded of its existence in the muscles, tendons, or cartilaginous structures; due perhaps to the anatomical arrangement of the proximate elements of which they are composed.

The blood is evidently vitiated; but the precise changes therein are unknown, except that there is a marked diminution of the solids as compared with the fluids, the red corpuscles being very much below par, in fine it partakes much of the nature of hydraemia. But still there is some inappreciable morbid principle apart from

this as is evidenced by the experiments of certain pathologists in producing the disease in the lower animals by inoculation. Certain investigations have tended to establish the fact of diminution of the fatty ingredients of the blood, and absolute or relative increase of the albuminous; and as these are two very important principles in tissue development, it would appear that the absence of one in any quantity would greatly interfere with the normal assimilative processes. Bennett adopting this theory, considers albumen to be the anatomical principle deposited in the lungs, and through a deficiency of fatty granules, defectively developed, or assuming an abnormal, morphological condition in the part. This doctrine seems strengthened when we consider the palliative, and in a few cases the almost curative influence exerted by cod liver oil upon the progress of the disease. Post mortem examinations have shown certain organs especially the liver to be loaded with fatty granules; but whether this organ has any causative influence, or whether it is only affected as a result of the ravages of the disease, has thus far

often established. Nor has any evidence been adduced [illegible]
fault, condition of the process usual, but not [illegible] is capable
from its important function of [illegible] the fate.
Now the chief starting point of the effect in many [illegible] op-
pears to proceed from a depraved condition of the digestive organs, for
from the nature of the animal economy, that [illegible] the healthy con-
vitality of the system, whether the cause acting be [illegible] or
equind, must finally have a weakening influence on the diges-
tive functions; in the consequence [illegible] must follow insufficient
digestion, ending at last in faulty assimilation.
Deficient innervation will be visited upon the digestive functions,
the secretion of the gastric and intestinal juices together with the flows
of the bile and pancreas, will be diminished in quantity as well
as quality, for the [illegible] of the principle of [illegible]
assimilation by the various tissues of the body. Not only will
this condition result from causes acting through the nervous, but
it may unfortunately arise from neglect of the laws regulating

the supply and quality of food as demanded by the system.
Often in the very beginning, and mostly at some stage of the disease, the digestive organs clearly indicate by functional derangement, and this apart from any deposit of tuberculous matter, that want of tone and activity which characterize their action in a normal state. This is exemplified in the symptoms first present, as anorexia, gastralgia, pyrosis, limitor or constipation in fact all the symptoms as manifested under various forms of dyspepsia. So clearly established is this condition, that many writers have denominated it abdominal phthisis. So long as any one organ of the body suffers, so long will all others sympathize; and how much more true will this be, if the mischief is located in one which has such an important office in the economy, as preparing principles for the nourishment and development of those organs which are directly dependent upon the well performance of its function; for so long as the principles destined for the nutrition of the body are impaired so long will malassimilation

ion continue, until finally unbearable from [illegible] or [illegible]
ing cause, or from an excessive abundance of [illegible] in the blood, Nature will endeavor to eliminate other [illegible]
with elements and with the view of establishing this local manifestation. The etiology of this disease as explanatory of its pathology is very much in obscurity. We know the exact nature of the affection, we know the condition of the blood which induces this mode of assimilation, then, pathology, injurious accumulation, commencement and much towards [illegible] for the [illegible] causes that are generable throughout sufficient for its development, induce a diathesis or only [illegible] between [illegible] during an already existing diathesis, can not be determined; through clinical facts appear to show that in subjects affected with rheumatism in whom there are functional murmurs at the orifices of the heart and in those in whom [illegible] there from, tuberculosis is not likely to be developed. In some instances the affection may be [illegible]

during the existence of bronchitis, bronchitis, and pneumonia, but whether they are efficient of themselves of causing their expression is often to doubt. The inhalation of irritating substances, as fine particles of metal, wood dust and the like, by exciting interstitial pneumonia - may determine a deposit of tubercular matter during the existence of the degeneration; but without this constitutional state they cannot be ranked among the efficient causes. The antibilious causes or miasmas, interfere with the innervation and nutrition of the system, indirectly favor the tubercular deposit, if indeed they do not influence in developing the inherent diathesis -

Want of food, deficient exercise, seclusion from the air, insufficient clothing, vitiated atmospheres, as is seen by its ravages among the poor classes, when from want of the proper means of observing the laws of health or otherwise, entire [illegible] of them, the sys[illegible]

duced to a state favorable for the ready reception of the disease. Certain climates have a prophylactic or almost curative influence, while others act as predisposing causes in developing it. Immunity to its influence is mostly observed in cold and dry, or warm and moist atmospheres, than where the temperature is variable and moist prevails. Malaria formerly considered as prophylactic, is now known to favor the death. Patients affected with scrofula, rarely become subjects of the disease, the former, as before observed, seeming to exert a prophylactic influence, or counteract the virus during its expression upon the lymphatic glands. A congenital or hereditary predisposition exists in many cases, and this cannot only be the result of a mere coincidence, as the opinions of such a large majority of the profession are decisive upon this point. The generation of the disease in the lower animals by inoc-

ulation has ground for the belief that it may be contagious to a more or less extent, and therefore propagated by contact with the breath and exhalations from the bod. is of consumptives: a supposition which, if verified, will have an important bearing upon the prophylaxis.

Whatever be the nature of the efficient cause acting, the progress of the disease, with few exceptions, is toward a fatal termination. Death occurs as a rule and recovery as a rare exception. This is clearly manifest in the the symptoms that present, as that of a disease, when once fully developed, devastating to the whole system, impairing and consuming all the organs and tissues of the body. During its advance, the muscular and adipose tissues waste, the skin loses its natural color, the bones project - signs of anæmia and debility are where present; and while the lungs are subjected to a continuous destructive process, exhausting discharges from other parts of the body attend.

in the forms of colliquative perspiration and diarrhœa. Substances that in health were assimilated by the economy, are now thrown off with the effete matters, as instanced by the immoderate presence of sugar in the urine. Hectic fever, cough and expectoration, continually harass and distress the patient; while the pulse indicates by excited action the near approach to death; which, as a general rule, occurs from asthenia unless it should sooner be ushered in by apnœa, from such an excessive destruction of pulmonary structure, or abundant deposit of tubercle, as to be incompatible with sufficient oxygenation of the blood. Thus we witness the almost utter hopelessness of the disease, and also the futile effects of remedial measures; which, though often to a more or less extent palliative, are far from specific. So long will the sway of this disease continue, and also be the opprobrium of the medical profession, until

by renewed pathological research, results shall be established, explanatory of its true anatomical character, nature and etiology, and bearing upon the prevention of its development and the arrest of its progress by hygienic and therapeutic means.

1874

A Thesis
on
Scarlatina:

Respectfully Submitted
to the examination
of the
Provost, Regent, and Faculty of Physic
of the
University of Maryland,—
for the degree
of
Doctor of Medicine:
by
Wm. N. Hardy,
of
Maryland.

Scarlatina.

Scarlet-Fever is one of the gravest diseases to which children are subject. It is both epidemic and contagious; and is characterized by continued fever, Scarlet-rash, appearing on the second day of the disease, and by sore throat. It is divided into two forms, mild and severe or simple and malignant. The frequency of the mild compared to the severe is as five to one. The invasion in mild cases is sudden and often occurs at night, when morning comes the body is generally covered with rash. We frequently have pain in the

back and limbs before the rash makes its appearance, and so great is the heat of the skin and the rapidity of the pulse that you may predict scarlet fever before the rash comes out. Simultaneously with the fever there is sore throat, the bowels are usually in their natural condition, but are sometimes constipated; there may also be diarrhoea. The period of invasion lasts about twenty four hours. The stage of Eruption comes on about twenty four hours after the invasion. The eruption generally appears on face and neck first, and in some mild cases does

not suffuse itself over the entire body; again, in some cases the eruption is seen on the body and limbs first, and is generally brighter at the flexure of the joints than any-where else. The skin on the face, feet, and hands, seems swollen, the skin is generally smooth, but sometimes little vesicles are formed which dry up and have little scales. There is in most cases a feeling of burning and itching which increases as the disease advances. The eruption generally reaches its height about the fourth day and remains stationary for a

day or more when it begins to decline, which is seen by the eruption losing its brightness, which grows paler and paler and is finally lost about the seventh or eighth day, at which time the intensity of the disease has run its course. All during these stages the heat of the body is intense, the pulse runs from one hundred and twenty to a hundred and eighty, the eyes are bright and are not intolerant of light, the cough is dry and frequent. The voice is seldom altered except by a sort of nasal sound while the disease is simple, but when

there is hoarseness there is great inflammation of Larynx, which is seldom seen in mild cases. At first the tongue is coated with a greyish fur, but as the eruption increases the coating of the tongue disappears and leaves it a bright red color, which gives the characteristic strawberry tongue of scarlet fever. Vomiting is not an unfrequent symptom, Sometimes there is slight tension and pain of the abdomen, The Pharynx is red and in some cases swollen and the tonsils are enlarged and become red, The sub maxillary and Lymphatic glands become tumefied and tender to

the touch, and deglutition is rendered painfull and difficult. These symptoms run on as above stated until about the seventh or eighth day when the disease begins to decline, the brightness of the skin is lost, the heat of the body becomes natural, the pulse regains its normal frequency, the cough ceases, the throat loses its soreness, and the patches of false membrane which are sometimes present on the fauces come off, and where there was difficulty of deglutition the swallowing is effected without difficulty or inconvenience. At this time the stage of Disquamation begins;

it commences in most cases on face and neck coming off in scales, then extending gradually over the whole body to the extremities where it comes off in gloves from the hands and in form of boots from the feet. The whole process lasts two or three days usually, but sometimes two or three weeks, it leaves the skin tender and irritable for a little time.

As the grave form of the disease is rare compared to the mild I will not go into details but will simply say a few words as regards the intensity of the symptoms compared with those

of the simple form. Every symptom is aggravated and more strongly marked. The presence of cerebral disturbances, convulsions, coma, and so forth, with the pseudo membranous exudation thrown out. Fauces more swollen and tumified, the hoarseness is more marked and the difficulty of swallowing is greater. There is great discharge from the nose and also from the ears which results sometimes in total deafness. The false membrane is not thrown out before the first day has elapsed and when it extends to the Larynx it forms one of the

gravest complications and is generally fatal. Dropsy is the most frequent sequela of this disease; it occurs about the third week during the desquamation period. The effusion usually commences in the face and extends to the hands and feet, and is generally confined to these parts, but it may extend over the entire body and to the internal organs causing a fatal termination in a short time. Diagnosis. The diagnosis cannot be made out with certainty until the eruption masks its appearance. To distinguish it from measles. In measles

the eruption comes out generally about the fourth day, first on the face and then extends ~~itself~~ gradually over the body.
In Scarlet fever the rash is sudden and generally comes out on the first day and sometimes sooner and does not necessarily come out on the face first. The eruption of measles occurs in distinct papulae which coalesce and form patches of an irregular shape with unaffected skin between. While the rash in scarlet fever is in the form of innumerable dots placed close together so

as to give a large surface of a uniform color like that produced by blushing.
In measles we frequently have complications of Pneumonia and Bronchitis, rarely in scarlet-fever. Seldom sore throat ~~or any~~ cerebral disturbances in measles; both of which you may have in scarlet-fever. Prognosis. You cannot arrive at a prognosis with any degree of certainty until three weeks or a month have elapsed, or until every sign of the disease has disappeared. For vomiting or Coma may set in at any time and carry

the patient. Some epidemics are a perfect scourge and prove very fatal. While others are mild and comparatively free from danger. The profuseness of the eruption does not mark the intensity of the disease. Among the unfavorable symptoms are a quick pulse and a hot skin, with cerebral symptoms, and sudden disappearance of the rash. Among the favorable signs is freedom from cerebral disturbance with moist skin and a moderately slow pulse. The third day is the period of

most danger. The disease proves very fatal in pregnant women, or one that has recently been delivered. It is never so mild as to be free from danger, nor so grave as to exclude hope.

Treatment. In the treatment of this disease it is important to know that it has a certain course to run which cannot be stopped, for in any attempt to cut short the disease you will be very apt to cut off the patient also. If the stomach is known to be overloaded with food

you may give Ipecac ten grains, with Alum one drachm to be followed after it has acted by Liquor Citrate of Magnesia. If the heat of the skin is great, and the pulse is very rapid you may do a great deal of good by sponging the skin with warm vinegar. When the throat and mucous surfaces are much involved use Fusion baths and a spray of Chlorate of Potash, If swelling is great apply ice internally and heat externally. The throat, if much affected, may be rubbed with the

following with good effect,

℞ Soap Liniment — ℥i
Camph " ℥ss
Tinct. Opii ℥ss —

hver blister the throat in scarlet fever. Clear out the mucus from the nose, and the membranous exudation from fauces. When ulceration occurs in the nose you may apply by injection, a preparation of Chlo. Potash, Carbolic Acid and Glycerine. When the pulse has lost its frequency and the skin its heat, the urine being clear, you may give Quinia

In some cases coming on with quick pulse, hot skin and vomiting, a hot bath is good. If the extremities are cold and the head is hot, apply hot fomentations and cold to the head. When the pulse is soft use stimulants. When false membranes is thrown out use chloride of Zinc. Diet should have particular attention, see that the articles of food are well prepared, wine whey and beef tea are very nourishing and should be given if strength begins to fail. The temperature of the room

should be kept between sixty-
and seventy-two degrees. You should
keep in mind that the dis-
-ease is contagious and not
let other children come in
contact with the clothes, or
anything that is used for
the sick; they should also
be kept out of the room.
Give Carb. Ammo, in adynamic
types to prevent coagula-
-tion of fibrin in the heart.
Belladonna has the reputation
of being efficient as a prophy-
-lactic in scarlet fever, and
although a great many doubt
its power you should admin-

-ster it, for it relieves the minds of the parents if it does no good; the following is the best way to use it. —

℞

Belladonna	grs iii
Alcohol	℥ii
Mint-water	℥ss.

One drop should be given for each year of child.

If dropsy is a complication and the skin is hot and dry give Antimony with epis, Ath, Nit, English Digitalis is good also.

When patient is weak and pale give the Tinct. of Chlo. of Iron, may also give in the same stage of

debility cod liver oil. If dropsy goes to the head and convulsions are imminent - you may take a little blood, mercury is never used in the treatment of this disease.

A Thesis on Diphtheria,
Written by

Elisha E. Mullins,
and

Presented to the Faculty
of Physic

in
The University of Maryland,

For the Degree of Doctor
of Medicine.

March 1st. A.D. 1874.

Diphtheria.

Diphtheria, from diphthera, a membrane, is a name which was given to the disease by Bretonneau, who investigated it to a great extent in the early part of the nineteenth century.

It is a constitutional disease, which like measles or chicken pox, has a local expression. Its local manifestation is an exudation, which shows itself upon the mucous membranes and the skin, when denuded of its epidermis.

History. Diphtheria is no

new disease. It was known in very ancient times. It was called, in the time of Aretaeus, the Egyptian or Syrian ulcer. An epidemic prevailed in Italy and Spain in the beginning of the seventeenth century, and since that time to the present, epidemics have prevailed in the New & Old World, at different times and in various places. Within the last few years we have had some severe epidemics in the United States. The diseases occurs in all climes, from the icy clad mountains of the North to

the sunny shores of the South. It spares neither the infant in its mothers arms, nor the old man leaning upon his staff. Children under ten years of age are more subject to the disease than the adult. The disease is always essentially the same, but varies greatly in type; each epidemic taking on a form peculiar to itself.

Caution, This disease, like a great many other specific diseases, prevails epidemically, although sporadic cases occasionally occur. The materies morbi of diphtheria is not known.

The contagiousness of the disease is still denied by some authors, but to be on the safe side, I think we should consider the disease contagious. I remember well one case mentioned by my honored Professor; the case of the late Professor Frick of the University of Maryland, who, in performing the operation of tracheotomy, placed the canula in the trachea, and blew through with his mouth. Some of the exudation was thought to have recoiled in his fauces. Within a short time he

was taken with diphtheria and died.

Anatomical Characters.

The principal lesion of this disease is the formation of a false membrane. There is at first an inflamed and congested condition of the tonsils, veil of the palate, or the part upon which the exudation is about to take place. After a few hours, a thin semitransparent membrane makes its appearance in one or several patches, which continue to grow thicker and wider, and after a short time

coalesce and form a complete covering for the mucous membrane, to which it adheres closely, dipping down into its substance. After some time the membrane becomes white or yellow. In malignant cases it has a dark appearance, due to condition of the blood. It is sometimes colored by substances swallowed. Hemorrhage may sometimes take place from rupture of the capillaries. This false membrane makes its appearance, for the most part, upon the

pharynx and larynx, but it may occur in the nares, from which, it may travel to the eye through the nasal duct, It may also attack the internal ear, through the eustachian tube. The mucous membrane of the mouth, stomach, vagina, prepuce, anus, and the glans penis may become invaded by the exudation. The membrane, after a few days, begins to undergo putrefaction, and is thrown off by a process of ulceration beneath it. The membrane may come away in shreds or be thrown

off all at once, It may be formed a second time or a third, and sometimes a fourth. The exudation, when subjected to microscopical examination, is found to be composed of epithelia, fibillae, amorphous matter, pus cells, red corpuscles, and in some cases a confervoid growth. The swollen condition of the cervical glands is a lesion of great importance, as regards the diagnosis of the disease, very seldom being absent. The glands, which correspond to the side first

affected become swollen first, then the other side. These glands very seldom suppurate. The blood has been found to be of a dark color after death, and has been compared to prune juice.

Symptoms, The symptoms of Diphtheria vary greatly in different cases, and in different epidemics. In the pharyngeal form, there is usually a feeling of malaise, anorexia, fever, and a slight soreness of the throat. There may be some difficulty in swallowing, but this symptom is not always present

The glands below angle of the jaw become sore and tender to the touch. This stage of the disease is often mistaken for a common cold. As the disease progresses the patient becomes very much debilitated, the pulse becomes feeble & the patient has a cachectic appearance, due to the destruction of the red corpuscles of the blood. In the malignant form of the disease the symptoms are much more severe. The system of the patient becomes, as it were, over-

whelmed by the specific poison, and death is produced suddenly by extreme prostration, whilst the patient is attempting to get up to stool, or trying to turn in bed.
In the laryngeal form of the disease, the symptoms are very insidious. The little patient may be playing about the house, with nothing apparently the matter, but a slight cold. Well would it be were it but a slight cold. But alas! soon other symptoms make their appearance.
A hoarse cough is heard,

which has been compared to the distant barking of a puppy. The breathing becomes difficult, and continues to grow worse, until the little sufferer's sides become depressed at each inspiration; its eyes have a wild, terror stricken look, and it strugles and gasps for breath. This condition continues until the near approach of death, when, from the want of oxygen and the accumulation of carbonic acid in the blood, the patient falls into semi comatose state and in a short time the

little sufferer falls into the arms of Death, who cradles it upon the bosom of eternal love. Albumenuria is a symtom in this diseas, which is very frequently present. It is a symtom of no very great importance, occuring sometimes to a great extent in mild cases, and to a slight extent in grave ones. Enteritis, pneumonitis, and Bronchitis are occasionally complications of this disease.

Diagnosis. There are few diseases for which diphtheria can be mistaken. The two for which it is most apt to be

mistaken, are pseudo membranous croup and scarlet fever. True croup is a local disease; diphtheria is a constitutional disease. The disease begins in larynx in true croup; it begins mostly in the pharynx in diphtheria, & may extend to the larynx. The cervical glands are swollen in diphtheria: they are not often swollen in croup. The membrane dips down into the substance of the mucous membrane in diph.; it does not in croup. Diph. prevails mostly epidemically: croup does not.

An exudation will take place

upon the skin, when denuded of its epidermis, in diphtheria: it will not in croup.
There is great depression of vital powers in diphtheria; there is not in croup. Diph. is frequently followed by paralysis; croup is not. In scarlet fever we have the characteristic eruption; in diph. we don't have the same eruption. In scarlet fever we have greater fever, than we do in diph. Scarlet fever is more apt to be followed by dropsy, than diphtheria. False membrane is not frequent in scarlet fever; it is rarely absent in diphtheria. The glands frequent

ly suppurate in scarlet fever; they rarely do so in diphtheria.

It is sometimes confounded with simple pharyngitis, but we can clear up all doubt by simply brushing away the exudation which does not adhere closely to mucous surface.

Prognosis. The prognosis varies greatly in different epidemics. No case is free from danger, not even the mildest form; but if well treated most of the cases of the mild pharyngeal form get well. The laryngeal and malignant forms are apt to prove fatal. In ir-

regular and feeble pulse is a bad symptom, and the case will be apt to prove fatal. The fatality is greater in the beginning of an epidemic, than near its close. The danger is greater in children, than in adults.

Sequelae. This disease has several sequels. A patient, after an attack of diphtheria, will have a pale look for some time, owing to the spanemic condition of the blood. Another more important sequel is paralysis. Sometime after the disease has subsided, and in some cases during the progress of the

disease, the patient becomes affected by paralysis. The muscles of the pharynx are the first to become affected by the paralysis. The veil of the palate hangs down in the fauces, and whenever food or drink is taken, it is regurgitated through the nostrils. The act of swallowing is also greatly impaired, so that several efforts are made before the act is accomplished. Often the patient suffers for the want of food, on the account of the paralysis. The muscles of various parts of the body may, likewise, become affected. The muscles of the eyes

become paralyzed, causing strabismus. Vision is sometimes impaired. Motion not only is lost, but sensation to a great extent. The visual power is frequently lost to some extent. The exact nature of the paralysis is not known. It is supposed to be due to a low state of nutrition brought about by the diphtheritic poison. This form of paralysis most always terminates favorably, after sufficient length of time has elapsed.

Treatment, There are two forms of this disease, which require somewhat different treatment.

First, that form in which it does not invade the larynx. Secondly, when

it does invade the larynx. The treatment in these two forms of the disease may be divided into local and constitutional. The constitutional treatment is essentially the same in both forms of the disease. It consists in giving tonics, stimulants, alimentation, and in paying attention to hygiene. The patient should be placed in a well ventilated room, kept at temperature of about 68° Fahr. If the bowels are constipated, he should have a saline laxative. Within late yrs. the sulphites have been used to some extent, but not enough

to take the place of more important remedies, which have gained greater confidence in the profession at large. The remedies, which are mostly used at present, constitutionally, are chlorate of potash, tincture of the chloride iron, and the sulphate quinine. Stimulants are to be given as soon as the powers of the system begin to be lowered. Concentrated nourishment should also be given throughout the disease, and especially when vital powers fail. Mercury has been recommended by some in those cases where the disease invades the larynx, & the patient is not too much

reduced. The paralysis should be treated with strychnia, iron and quinia. Local treatment - The local treatment of diphtheria is somewhat varied. Bretonneau & Trousseau, bleiving the system to be reinfected by the local exudation, used very strong caustics; but the profession in this country, bleiving this to be quite a hypothesis, do not attach so great importance to the local cauterization; but use the weaker caustics, such as a weak solution nitrate of silver, Tr. Ferri chlo. & solutions of carbolic acid. Astringent gargles may be used, and also solutions of Chlorate of Potash as a gargle. In the laryngeal form, emetics

should be given, but not to an extent to reduce the patient.

The non depressing emetics should be used, such as alum, sulphate of copper, and turpeth mineral. Ipicac may also be used. If the laryngeal symptoms are urgent, and the patient gasping for breath, the operation of tracheotomy becomes imperative. Some lives are certainly saved by the operation.

Thesis

on

Anatomical Lesions, Causation and Clinical History of Epidemic Fever.

Submitted to the

Faculty of Physic

of the

University of Maryland

by

D. Lewis Wallace

of Georgia.

For the Degree of

Doctor of Medicine.

1874.

"Every atom in the universe is linked in manifold unity to others, that a deep full treatise upon one thing might reach to a history of all things: and before some single thesis had been followed out in all its branches, the wandering thinker would be lost in the pathless forest of existence".

Anatomical Characters, Causation and Clinical History of Typhoid Fever.

Unlike many other diseases Typhoid fever confines itself to no country or section of country and to no condition of mankind. It has been wide spread in this country, extending from the marshes along the Atlantic to the borders of the Pacific.

It has been defined to be a febrile condition of uncertain duration accompanied by marked intestinal derangement, and invariably associated with lesion of the solitary and agminated glands of the intestines.

Anatomical Characters. The only dis-

tinctive lesions are those occurring in the solitary and agminated glands or patches of Peyer; and without positive evidence of inflammation in these glands we cannot say that any particular case is one of typhoid fever. "A Peyer's gland or patch presents in a state of health a variable number of rounded, shallow, concave depressions, averaging the 10th of an inch in diameter, and separated by narrow linear ridges of mucous membrane, running in from the general mucous surface and on a level with it, and forming a network in the meshes of which the so called "closed follicles" lie". Usually there is evidence of acute inflammation. Flint

says the first step in the series of morbid changes in the solitary and glands of Peyer is enlargement from the presence of a morbid product, in [illegible] as the typhous material, occurring probably within the glandular sacs; but says that it is not certain [illegible] that any increased vascularity occurs prior to the deposit. Other writers say there does precede a stage of vascular excitement, and that the deposit does not occur within the sac but in the periconnective tissue - "for", say they, "in such a case the follicles themselves would become distended, and as a [illegible] we would find in his stage [illegible] upon the surface of the patches of Peyer, which is

in the case. On the contrary, says Hirschy I have always found them in the earlier stages of the inflammation to be placed far below the swollen ridges of the mucous membrane and submucous tissue surrounding them, and in the latter stages the follicles are completely, quite beneath the inflammed surface of the palate, and concealed from view, and it is only when the excessive vascular and turgid ridges of the mucous membrane and subjacent tissue are disintegrated, that the follicles are again discovered lying deeply in the abundant submucous tissue, and exhibiting little or no increase of size. It seems that while the changes going on are due to some specific

poison in the system here manifesting itself in local lesions, the inflammatory changes are about the same in character as those occuring in other parts of the system and under other conditions - varying in no essential particulars either in the stages of modes of resolution. [illegible] T[illegible]s seem to be almost solely involved and appear very similar to the non-syphilitic bubo. The [illegible]dation once called Typhous [illegible] is [illegible] different from that occuring in other parts of the body. Virchow says the enlargement is due to a hyperplasia of the cellular elements within the [illegible] which form the follicles and solitary glands. Varely says in [illegible] is due

to the [illegible] in process of the [illegible] passing [illegible] [illegible] of the [illegible] [illegible] Physicians [illegible] [illegible] etc. The [illegible] [illegible] patches present a [illegible] [illegible] projecting [illegible] the corresponding portions of the [illegible] give evidence of deep congestion. The patches are usually [illegible] [illegible] dis[illegible] varying from [illegible] [illegible] [illegible] are [illegible] feel to the [illegible] and are sometimes smooth, sometimes granulated. These appearances begin to present themselves very early having been observed as early as the second day. The morbid changes commence and run their course earlier in the glands [illegible]

the mucosa, and gradually go upward. After the tenth day the inflammation either subsides or grows more intense. Resolution is effected in the usual way, the swelling and vascularity gradually decreasing; or, if the inflammation increases, the patches grow more large and more vascular, finally the mucous membrane becomes eroded and sloughing takes place leaving the glands and patches the seat of ulcers. Ulceration may take place in the lower patches as early as the second week, but it gradually extends to those higher up. Frequently the muscular fibres at the bottom of the ulcers is exposed to view, when they and the mucous peritoneum form the only support of the intestine at the part of

ulceration. Sometimes the mucous mem-
brane so overlaps the seat of ulceration
as to prevent the appearance of cicatri-
zation. Cicatrization is apt to com-
mence usually in the twentieth day, but
this may occur sooner or later, according
to severity of the attack &c. Cicatrization
in typhoid fever never tends to form
stricture, but I can easily conceive that
ulceration might go on to such extent
as afterwards to produce stricture of
the bowel to greater or less degree. Perfo-
ration of the intestine is liable to occur
in one or more patches; and this may be
due either to extension of ulceration
through the muscular and peritoneal
coats, or to rupture or sloughing of these

coats. If due to extended ulceration the opening is sometimes so small as hardly to be noticed save by the closest scrutiny. If, on the other hand, the coats slough or are ruptured by accumulation of flatus or other material, the opening is much larger. Intestinal perforation is usually associated with more or less grave symptoms of acute peritonitis. This is sometimes prevented by adhesive inflammation taking place previous to the occurrence of perforation. These lesions are peculiar to typhoid fever and are always present to greater or less extent. They occur in no other disease, and are as much a part of typhoid fever as the eruption is of Variola or the false membrane of diphtheria. At the same time

then can no more be considered the disease than can the local manifestations in those diseases mentioned. Symptoms formerly thought to occur in this disease from purulent contamination of the blood from the ulcerated glands are now known to occur as well in typhus in which we have no such intestinal lesions.

The other lesions found are not peculiar to typhoid fever being found in other diseases known to be entirely distinct.

The spleen in the majority of cases is more or less enlarged and congested, and is sometimes the seat of hemorrhagic extravasations; cases have been reported in which rupture of the splenic capsule occured, followed by escape of blood into the peritoneum.

Ulcerations very minute have occurred in the pharynx and oesophagus in a small proportion of cases. These probably are similar to the various forms of stomatitis occurring in other derangements of the alimentary canal.

The cerebral symptoms are now known not to be due as was formerly supposed to inflammations either of the brain itself or its meninges. Cerebral congestion is not uncommon together with serous effusion into the subarachnoid space and lateral ventricles. Recent investigations seem to prove that this is owing to the occurence of histological changes in the walls of the minute blood vessels supplying the brain so as to interfere with the

process of nutrition and thus producing stasis. The brain substance is usually found in an anaemic condition.

Inflammation [illegible] mucous membrane is [illegible]

The condition of the [illegible]

Causation. The [illegible] are Exposure and Exciting Cause [illegible]

of the [illegible] in [illegible]
[illegible] [illegible] [illegible]
[illegible] a [illegible]. more than half were b
tween the ages of fifteen and twenty five;
one with [illegible] [illegible] one [illegible]
above thirty: and only one sixty eight years
fifty years of age.

<u>Seasons</u> have been a [illegible] influence
in some [illegible] it is known as Autumnal fever
It is less common during the warm and [illegible]
months, and gradually increasing becomes
more common during Summer: and finally
reaching its acme of [illegible] in Autumn.

<u>Temperature</u> and <u>rainfall</u> have generally
been considered [illegible] influence in its [illegible] dry and warm
seasons being more conducive to its [illegible].

duction than [illegible]. Other atmospheric conditions have [illegible] some influence, such as the absence ozone from the air &c. but of these conditions so little is as yet known to draw accurate conclusions. The atmospheric observations now being made [illegible] will probably throw great light upon this [illegible] interesting subject.

Exposure, fatigue, mental depression, bad food have been thought to predispose to it, but these may be considered as predisposing causes of many diseases and not peculiar to typhoid fever.

Both sexes are equally liable to the disease.

<u>Exciting Causes</u>. It has long been debated whether or not typhoid fever is a

contagious disease, but as yet no positive conclusions have been arrived at. If we take such observations as those made by Flint at North Boston it would seem almost certain that typhoid is contagious; but we can only generalize from a vast number of observations, for in such experiments controlling conditions are so often overlooked even by the best and most accurate observers as to render single observations of little value. That it may in some way be propigated by taking in the poisoned excretions of those suffering from the disease cannot be doubted. Recent observations and experiments made upon milk of cows both in London and this City would seem to show that may be prop-

igated outside of and introduced into the human body. Whether there is any peculiar materies morbi of typhus may be considered in the present condition of the science a[illegible] judice; and he, who discovers its origin [illegible] deserve to rank with Edward Jenner [illegible] the great benefactors of mankind.

[illegible] This [illegible] in different cases from a few days [illegible] as the mean duration. One [illegible] of this period consists of three

[illegible] usual course of [illegible]
[illegible]. Cephalalgia is a [illegible]
[illegible] occurence the pain being [illegible]
[illegible] frontal region and of varying [illegible]
[illegible] often being so severe as in [illegible]
gitis. Mental irritability and want of con-
centration may frequently be observed. Dose
a [illegible] with occasional nausea, but rarely
vomiting. Epistaxis is of such common
occurrence as to be ranked among the diag-
nostic signs. Pain in the loins, limbs
and [illegible] : [illegible] of the
bowels or [illegible] is [illegible]
[illegible] Of these
loosenes of bowels and epistaxis are [illegible]

[illegible] days to [illegible]. The duration of this period is [illegible] important.

The general appearance of the countenance is not usually much changed during the first few days, but after the disease has continued some time it gradually assumes a listless stupid expression which in [illegible] cases [illegible] entirely [illegible] it. The [illegible] presents a more or less dusty, hazy appearance. Slight capillary congestion extending over the whole body but more marked upon the face neck and hands. This symptom is never so marked as in typhus fever.

Nervous System. Pain in the head usually continues for some days, but is not complained of often after the first few days unless the

patient be questioned - in fact the mind soon reaches such a stage of inactivity that the patient complains of nothing, asks for nothing and seems to care very little for anything. Delirium sooner or later manifests itself in the majority of cases though not always. It is usually of a mild type and generally manifests itself by incoherent mutterings and silly answers. The patient seems often not to know his surroundings and frequently expresses a desire to go home. Occasionally though rarely, the delirium grows maniacal in its wildness and the patient has constantly be watched and restrained. Delirium most commonly shows itself only at night and is then always worse. In some cases there is no manifestation of de-

lirium during the attack, but after recovery nothing is remembered. The whole period is a blank page in his existence. Wakefulness is often a marked symptom and adds greatly to the distress of the sufferer. Sometimes the patient lies in a listless condition half asleep and half awake. A condition known as Coma-vigil. The condition often presented of mingled stupor and delirium is known as typho-mania. Coma is a sequel but not a consequence of this condition [illegible] developed gradually, rarely suddenly. It is always of serious omen. Ataxic symptoms of serious import are grasping at invisible objects called carphologia and twitching of the muscles of the face and extremities known as subsultus tendinum. Convulsions

are rare and betoken a fatal result.

Urinary canal. Anorexia is [illegible] that the appetite may remain good and food be accepted when offered though not called for, owing to the morbid condition. This is common though subject same conditions as desire for food. The tongue generally presents morbid appearance and is often covered with a thick coating of a dark brownish or yellowish color. The coatings are not unfrequently thrown off several times during the attack when it assumes a reddened appearance. If it remains of the natural color and moisture after convalescence. Sometimes from the patient breathing through the mouth the tongue becomes excessively dry and parched and may become

cracked or deeply fissured. The peculiar tremulous condition of the tongue and slowness and vacillation with which it is protruded and retracted shows the ataxic condition of the patient both in mind and body. Dark collections called sordes make their appearance upon the teeth and lips in most cases. Hemorrhage from the gums is not common. Sometimes the parotid glands are inflammed and generally suppurate - thus differing from mumps. This occurs also in typhus. Vomiting is rare and generally caused by improper ingesta. Diarrhoea occurs in a vast majority of cases, the stool presenting a yellowish ochre appearance. This symptom depends on the intestinal lesions. In rare cases the bowels are con-

stipation throughout [illegible] attack. The stools are usually of an alkaline reaction. They may be passed in bed [illegible] [illegible] or [illegible] [illegible] [illegible] [illegible] [illegible]. [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] as many recover. [illegible] [illegible] [illegible] continues at [illegible] [illegible] the patient from weakness. Like the [illegible] [illegible] [illegible] [illegible] but occurs late in the attack. Other abdominal symptoms are meteorism or tympanites, tenderness or pain on pressure, and gurgling. Tympanites is almost always [illegible] to greater or less extent due to

accumulation of gases in the colon, and giving on pressure especially in the right inguinal region is seldom absent. Pain on pressure is so common as to be diagnostic, but in many cases sudden and deep pressure will bring it out. These three symptoms together with diarrhoea or constipation of the bowels, and ochre colored stools are highly diagnostic signs of typhoid fever.

Perforation of the small intestine more rarely, also of the large - is met with at times. This much dreaded accident is as likely to occur in mild cases as in severe ones and is the cause of many a death after all else has gone well for some days, occurring as it does in mild as severe cases, and may

frequently after convalescence has commenced. It may be expected if persistent diarrhoea, tenderness and tympanitis increase and vomiting and hiccup supervene. Peritonitis, manifested by sudden increase of all symptoms, general pain and tenderness over the abdomen with wild uneasy look in the patient's face and firm compression of the lips, is the sequel almost inevitable. It may be induced by extension of inflammation from the ulcerated patches through contiguity of structure; but in this event it is not so serious being localized and not universal as when perforation allows the escape of the intestinal gases and other contents.

Of the symptoms [illegible] most characteristic is the rose colored eruption

It is absent in [illegible] than it five per cent of the cases. It belongs to the class of papulae, and consists of minute rose colored papules, or as called by Louis lenticular rose colored spots. They are slightly oval in form and from one to two lines in diameter. The redness disappears under pressure to return again. The number varies in different cases and at different times in the same case. Sometimes there may be only two or three, or there may be many. In the majority of cases the number does not exceed fifteen to twenty. They occur in crops and several of these may come and go during an attack. They are generally confined to the trunk and limbs. They are to be sought for first over the abdomen and chest. Then on

the shoulders and back. They generally make their appearance between the seventh and fourteenth days, reckoning from the beginning of the attack. Any other eruptions that may occur is accidental and of no importance. Perspiration more or less abundant is present in about half the cases. It does not as in some cases indicate a critical period - and seems at times to occur from mere debility. During the greater part of the attack the skin is dry. Gangrene is a rare occurrence, but has been known. The nates, hips shoulders and any other bony prominences are liable to extensive sloughing if long subjected to pressure - owing to the general perversion of nutrition. It should be always expected and proper means

instituted for the prevention.

The respiratory system furnishes important complications. Pneumonitis is a not infrequent complication and as is always the case with secondary diseases, is apt to be overlooked. It can frequently be diagnosticated only by the physical signs. A hurried respiratory movement with increase of febrile symptoms should always lead us to suspect thoracic complications and cause us to examine closely. In pneumonia the increased ratio of respiratory movements to the radial pulsations is a marked symptom. Its supervention does not preclude recovery but of course seriously complicates the prognosis. Cough is not a prominent symptom; but slight or moderate cough is usually present

from congestion or subacute inflammation of the bronchial mucous membrane. Frequent sighing early in the disease is of serious omen as forerunning grave ataxic symptoms. A diaphoresis in [illegible] with distress of breathing indicates the approach of coma and death. Epistaxis is common in the first stage of the disease, sometimes occurs later in the attack and though generally not serious, it sometimes requires medical means for its arrest. Affections of the larynx and pleura may complicate the affection.

Liberation. [illegible] of the fever in the case of this disease, but this varies in different cases and different periods in the same case. The fre-

quency of pulse is to some extent in proportion to the gravity of the attack. When it [illegible] 120 [illegible] to [illegible] attack is serious. It may not be above the normal during [illegible] of [illegible] attack. A sudden and great fall in the number of pulsations is a bad sign. There are [illegible] or irregularities of the pulse in this disease. A rapid increase of pulse denotes the supervention of some complication as pneumonitis or peritonitis. The pulse may be rapid, but is quick and vibratory and does not denote increase in power of ventricular contraction. On the contrary we may consider that power or force decreases as rapidity increases, and vice versa. The introduction of the Sphygmograph

its practice will [illegible] of
importance in connection with the fever — the
reactive action that is some impossibility one or
two.

7 Temperature. In no disease perhaps does
the temperature attract so much attention
as in typhoid fever, and in none has it
given us such sure indications of its value
in the treatment of disease. To the rule,
that at some period of the disease the temper-
ature is raised, there is no exception. Modern
investigations have established the rule that
gradual rise of the temperature from the
normal 98.5° continues for the first four
or five days; reaching on the evening of
the first 101° — 104.5°. Upon attack of disease
in women on the second day the heat in the

[illegible] is as high as 104°, is not typhoid; and the same exception applies if from the fourth to the seventh day the temperature falls below 103°. There is a marked oscillation between morning and evening temperature in this disease, the difference being from 1.5°–2° up to the period of convalescence when it is greater. A higher temperature in the morning than in the evening is a bad sign.

<u>Urine</u>. The urine is usually scanty, and high colored; of great sp. gr., and contains a greater abundance of urea and uric acid than in health. [illegible] albuminuria [illegible] and is a sign of a complication during [illegible] fever. It may continue from three, four, or more to twelve days. Urinary casts are of-

found in the urine it shows that renal disease probably existed prior to the attack. It is probable that when coma and convulsions occur they are caused by uraemic poisoning.

The duration of the disease varies in different cases, and according as the estimate is made from the beginning of the attack or the time of going to bed. Flint found in his cases the minimum 6 days; the maximum 28 days, the mean being 15 days. Other Authors give the duration as longer; thus Murchison found the mean in 75 cases to be 24 days.

The period of convalescence also varies greatly in different cases, going from one week to [illegible] months.

I have not met with in patients convalescing from this disease the appetite is simply increased and requires restraint. Relapses are not of frequent occurrence; but they have been known to occur, going through all the stages, and when death has occurred two sets of ulcers are found. In a case in which I saw the more extensive, the two may be fatal.

The sequellae are not peculiar, but are such as may occur in any other exanthematic disease.

1874

An
Inaugural Dissertation
on
"Visual Accommodation."

Submitted to the Examination
of the
Provost Regents and Faculty of Physic,
of the
University of Maryland.
for the Degree
of
Doctor of Medicine,
by
Eldridge C. Price.
of
Baltimore, Maryland.

To
Julian J. Chisolm, M. D.
Dean of the Faculty of Physic,
and
Professor of
Ophthalmic and Aural Surgery,
in the
University of Maryland.

This Essay
Is most respectfully dedicated as a
Mark of respect for his high
Professional Attainments,
By the Author.

A New Theory.

The subject of which I propose to treat concerns one of the most complicated and most beautiful organs of the whole body. It is that organ through which impressions of the character, shape and form of external objects are conveyed to the brain. An impression made through this organ upon the brain is retained longer, and is more vivid to the mind than any other impression conveyed through the medium of any other organ of special sense to the great sensorium. Poets have called the eye the window of the soul. And it has been said that it has a language independent of the voice. A glance may contain

more meaning than a volume of words. Through the agency of the eye some of the most pleasurable sensations are excited. What other sense could be substituted for the eye in the enjoyment of beauty, the contemplation of the deep ever-restless Ocean, or the boundless infinitude of space, the Universe, in which are set myriads of worlds, which glitter in their transplendent glory as diamonds in a jewelled diadem? It would be impossible to enumerate all that we enjoy through this precious gift, the eye. And all this beauty in Nature we would be unable to enjoy were it not for a certain attribute of the eye,

the power of accommodation. The distance for normal distinct vision is at about ten inches from the eye, and if that distance be either increased or diminished and no allowance be made in the eye, vision becomes indistinct. More so the further the object is removed from the point of distinct vision. Now of what use would this delicate organ be to us in this imperfect state? But as nothing in Nature is not perfect in itself, so the eye was not left in so imperfect a state, but was supplied with the power to accommodate itself to near and distant objects equally well. This power has been called visual accommodation.

With this wonderful accommodative power we may at one moment regard a minute object so small as to be almost imperceptible, and at the next be gazing miles away at some distant object just on the verge of the horizon. To perform this wonderful change, nice adjustment of the eye is required, and for this purpose the finest and most delicate piece of mechanism has been provided. So fine and complicated in fact, that for ages men have studied and puzzled over this great enigma of Nature, and have gone to their graves not much the wiser for all their pains. Concerning this power of the eye, many theories have been written, and each one may have seemed plausible

enough at the time; but "the World moves" and improves as do the ideas of men.

Other theories were written which would seem to approach nearer the truth than former arguments. So men were constantly kept in doubt in regard to which of the many hypotheses might be correct. Fletcher of Edinburgh denied that any change was needed in transferring the sight from distant to near objects. How any one can believe in any such unsatisfactory doctrine as this, I can not conceive. But it is said he was not alone in his belief; but had adherents, brother physiologists who sincerely believed his idea was correct. It has been positively affirmed by others that a change does take place.

Their ideas concerning this change are various. One with which the virus of Jurin, Ramsden, Home and others coincide, is that a change takes place in the curvature of the cornea. It becoming more convex for near objects and less so for distant ones. Now this theory was soon proved to be false by careful observations, which showed the curvature of the cornea was not altered by the function of accommodation; but preserved the same convexity during all the changes in which it was thought to participate. Another argument was started in favor of the idea, that this power was accomplished by the movements of the ball of the eye: becoming elongated for near objects and shortened for

those more distant. Wagner in his Physiology, in an article on accommodation (pages 586-7) offers the following remarks: "The extent to which the muscles of the eye concur or aid in the act of accommodation, is not yet satisfactorily settled." And then in a foot note says: "Although recent observers have spoken decidedly against the idea of the eye gaining its accommodating power through the action of the muscles the following conditions appear to me to give it countenance: 1st The muscles by acting together draw the globe of the eye backwards, and so shorten it, or forwards and so lengthen it. 2d The feeling of weariness and almost pain which I experience plainly in the circumference of the globe of the eye, and as it appears to me in the

muscles, when I make efforts at accommodating my sight to objects not within the sphere of easy vision to me. 3d. From the motions of the iris so constantly associating themselves with other motions that certainly depend on the occulo-motory nerve. At all events it seems that further observations are still requisite before we decide that the muscles are altogether inoperative and inefficient in the faculty which the eye possesses of accommodating itself to near and distant objects." This theory of the movements of the eyeball may have seemed plausible to him; but had he tried the experiment of cutting all the muscles surrounding the eye, it would have been disproved. This was afterwards tried and it was found that the power of ac-

commodation was not injured by the experiment. Consequently this theory was "null and void", and was no longer mentioned as something that might be correct. Knox and others ascribed this power of adaptation to the iris, the motions of which might alter the curvature of the lens; or as Sir David Brewster believed, cause the lens to change its place and come forward during contraction of the pupil. But this idea has been given up, since a patient of Von Graefe's who had completely lost his iris, was found still to retain the power of accommodation.

Des Cartes, Albinus, Hunter and Young considered the lens to be a muscle, and to possess the power within itself of changing its curvature. It was supposed that

the crystalline lens was the muscle and the ciliary processes its tendons. This idea was hardly countenanced by most later physiologists, and at the present time has been completely abandoned. Still another hypothesis was written by a German named Maximilian Langenbeck. In 1849 he imagined he had discovered a circular muscle running around the edge of the crystalline, which influenced it in the power of accommodation, to which he gave the name of musculus compressor lentis accommodatorius, and which he figured in his book; but as the orbicular muscle of which he speaks has not been found by any other observer since, the conclusion is he must have been mis-

taken. But the conclusion to which nearly every one has finally come is that the crystalline lens is altered in shape in the function of accommodation, becoming more convex for near objects and less so for distant ones. The changes that are now generally believed to take place in the adjustment of the eye for near objects, are thus summed up by Helmholtz. viz: "1. The pupil contracts. 2. The pupillary border of the iris moves forward. 3. The peripheric part of the iris recedes. 4. The anterior surface of the crystalline lens becomes more convex, and its vertex moves forwards. 5. The posterior surface of the lens becomes somewhat more convex, and does not sensibly change its place. The lens becomes

therefore thicker in the centre." Hensen and Völker both acquiesce in this belief; but in their diagram illustrating the changes the lens undergoes in accommodation for near objects, represent it as not only increased in convexity anteriorly and posteriorly, but as increased in bulk also. Their explanation is as follows: "The crystalline lens consists of a series of tubes arranged side by side. When the eye is in a state of rest, i.e. when it is accommodated for distant vision, these tubes are empty; but when accommodated for near vision, the ciliary muscle pumps water from the canal of Petit, which surrounds the lens, into these tubes, thereby increasing the size and altering

the shape of the lens." Now I do not pretend to say this is not the case; but as as they have gone so far as to explain how the lens is increased in size and to compare the canal of Petit to a reservoir containing a sufficient supply when needed, they should have explained how the tubes empty themselves, and what effect their being filled has on the refractive properties of the lens. Of this they say nothing. And shall we accept a theory which is no clearer than this? Wagner says, "The reason of the accommodating power has been sought for in the motions of the iris, in the lengthening and shortening of the axis of the lens by a faculty inherent in its structures, in an alteration in the curvature of the cornea

effected by the action of the muscles of the eye, etc. These views have all been lately rendered untenable." I think the other theories not mentioned by Prof. Wagner might also rank with those that have proved untenable, even the one now generally believed concerning the increased and diminished convexity of the crystalline lens, after the views of the physiologist of whom I am about to speak, have been disclosed, and whose theory has been the sole cause of this dissertation. Experiments were made by a Dr. R. E. Dudgeon, of England, which resulted in the following theory: viz. "Considering the number of great ophthalmologists who have given the authority of their names in favor of

the view that the crystalline lens increases in convexity in accommodation from distant to near vision, and of those who have invented such ingenious explanation of the way in which this increased convexity is brought about, it may seem presumption in me to deny that any increase of convexity or alteration of shape occurs in the crystalline at all.

Still I trust I shall be able in the following paper to show that no alteration of convexity takes place in either face of the crystalline, in the act of accommodation, and that the phenomena observed during its performance are explicable without having recourse to such an improbable hypothesis.

The optical construction of the eye resembles that of the camera obscura, or photographic camera, the rays of light being refracted by means of a compound lens (made of the aqueous humor and crystalline lens) so as to be focussed accurately on the retina, which answers to the screen of the camera. In its state of rest, the compound lens of the eye is adjusted for distant vision or parallel rays. Now supposing the lens of the camera adjusted for distant vision or parallel rays, it is incapable of focussing accurately the rays of light for near objects. The reason of this is, that the rays from a near object impinge on the lens more obliquely than the parallel rays from a distant object.

and are therefore focussed beyond the screen adjusted for distant objects. The adjustment for near objects is capable of being effected in several ways: 1 By moving the lens further from the screen. 2. By placing an additional lens in front of the lens adjusted for distance. The focus is thereby shortened to the desired length. 3. By substituting a more powerful lens, consequently one with a shorter focus, for the lens that suffices for distant objects. 4. By retaining the same lens at the same distance from the screen, but giving it a slight turn on its axis. The focus is thereby shortened, but in the case of a lens with spherical surfaces, there occurs more or less confusion of the image depicted

on the screen, which is corrected by placing in front of the eye a diaphragm with a small aperture, whereby the aberrant rays of light are cut off and the image is rendered distinct. Now let us see how these various methods of adjusting the lens of the camera, from distant to near objects will help us in understanding the phenomena of accommodation of the eye. It was formerly supposed that the length of the optic axis was increased by the pressure of the external muscles on the eyeball. But this is now known not to be the case; for not only would the simultaneous action of all or some of the muscles not produce the effect (rather the opposite effect), but it has been proved

that eyes have retained their adjusting power when all the external muscles are paralyzed.

Sir David Brewster contended that the crystalline lens moved further forward, and so increased its distance from the retina, but he does not show us by what mechanism this advance was effected, nor does he tell us what becomes of the portion of the aqueous humor, that must be displaced by the advance of the lens. It is evident it can not be pushed forward for the cornea does not alter its shape in accommodation for near vision, nor can it find its way to the back of the lens, as the ciliary ligament and zonula Zinnii would effectually bar its passage. 2. When the adjusting power is lost or impaired by old age or other causes,

we can cause the rays from near objects to be focussed accurately on the retina by placing a lens before the eye - in short by wearing spectacles. 3. It was at one time thought that the refractive power of the dioptrical apparatus of the eye was increased by the cornea becoming more convex, owing to the pressure of the external muscles. But it is now ascertained that the convexity of the cornea is not altered in accommodation for near vision. The generally received doctrine now is that the convexity of the crystalline lens, and especially of its anterior surface, is increased in accommodation for near vision. Donders indeed goes so far as to give us the exact amount of this increase. He says (accommoda-

tion and Refraction of the eye, page 67) that whilst the radius of curvature of the cornea remains fixed at eight millimetres that of the anterior surface of the crystalline lens increases from ten millimetres - its convexity when the eye is accommodated for distance - to six millimetres when accommodated for near objects; the convexity of the posterior surface increasing at the same time half a millimetre. The refraction of the eye is as I said performed by a compound lens made up of the aqueous humor and the crystalline. If the curvature of the cornea and the anterior surface of the crystalline were spherical, and we know exactly their radii of curvature, we could easily calculate to a nicety the focus of the lens formed

by the aqueous humor. But we know that these surfaces are not segments of spheres but of ellipsoids; the figure of the cornea being such that it is more convex in the centre than at the sides; whereas that of both surfaces of the crystalline lens is the reverse of this, and they are less convex in the centre than at the sides. Any calculation, therefore, that we make of the focus of the aqueous humor on the supposition that its surfaces are spherical must be erroneous. The measurements given by Donders refer to spherical surfaces, and are a sort of average of the surfaces measured. But as the central portion of the cornea is more convex than if it were spherical;

and the central portion of its posterior concave surface, formed by the front of the crystalline lens is less concave than if it were spherical, and moreover, as it is only through this central portion that the rays of light have access to the interior of the eye, the remainder being covered by the iris it is obvious that the aqueous humor must have a shorter focus than it would appear to have from calculations based on the idea that the surfaces are spherical. If the convexity of the crystalline increased in accommodation for near vision, and the lens consequently increased in thickness in the middle, it must diminish in circumference and consequently the edge

of the lens must be further removed from the ciliary processes (supposing these to remain fixed) in near than distant vision. But though Becker, quoted by S. Wells, says he observed an increase of space between the edge of the lens and the ciliary processes in albinotic eyes during accommodation for near vision. Graefe alludes to nothing of the sort in the case of aniridesis with perfect accommodation described by him; indeed, though he says "it was easy to convince oneself of the increased convexity of the anterior capsule when the eye was accommodated for near vision", he does not say how this conviction was obtained) he confesses that no change

in position or form of the ciliary processes could be detected. (Nor does Donders observe any thing like it in a case where iridectomy had been performed and the margin of the lens was visible.

4. Thus as the shortening of the focus of the dioptric apparatus of the eye in adjustment for near vision is not affected by an advance of the crystalline nor by the addition of a supplementary lens, nor by increase in the convexity of the cornea or crystalline lens, it can only be brought about by a slight rotation of the crystalline lens on its axis and a careful observation of the movement of the image

of the candle reflected from the anterior surface, will teach us the direction of this rotatory movement of the crystalline in the adjustment from distant to near vision. In order to observe this movement with the greatest accuracy, I constructed an apparatus similar in principle to that used by Cramer for the same purpose, but modified in such a manner that I could at will observe the eye from either side, while the candle was placed on the opposite side. While the observed eye was steadily fixed on an object right in front of it, the light of candle impinged on the observed eye at 30° on one side of the line of vision.

In this way I could see the three images of the candle as they were reflected, respectively from the cornea, the anterior surface, and the posterior surface of the crystalline. When I observed the eye directed to a distant object from the nasal side, the light being on the opposite or external side, I found the dim ill-defined image reflected from the anterior surface of the crystalline occupying a place between the other two bright images reflected respectively from the cornea and posterior surface of the crystalline. On causing the observed eye to look at a near object on the same line of vision the dim image moved distinctly towards the large bright image reflected from the cornea,

and it moved back to its former place as soon as the eye was fixed upon the distant object. I now changed the position of the candle and microscope, and observed the reflection from the external side, the light of the candle impinging on the eye from its nasal side. The three images were again seen nearly in their former positions when the observed eye was directed to the distant object. On again causing the observed eye to look at a near object the dim image now moved through an appreciable space towards the small inverted image reflected by the posterior surface of the crystalline, thus proving that the movement of the crystalline was in the same direction as in the

former case. Had the anterior surface of the crystalline increased in convexity in the act of adjustment from distant to near vision, it is obvious that in both cases the image of the candle reflected from its surface would have appeared to move towards the apex of the convexity, to wit, the centre of the pupil, but on the contrary, in both instances it moved towards the external edge of the pupil, showing that the change in the aspect or slope of its anterior surface, and that this change consisted in a slight movement of rotation from without inwards. The figures given by Cramer distinctly agree with what I myself observed in looking at

the eye from the nasal side. But the figures given by Donders, show conclusively that the motion of the crystalline is as I have stated it to be. In his figure of the eye accommodated for distance the image from the anterior surface of the lens appears in the centre of the pupil, and in that of the eye adjusted for near vision it has moved towards the pupillary border of the iris, which it could not have done had the change consisted in an increased convexity of the anterior surface of the crystalline.

In Donders' figures the size of the reflected image has become smaller, and he alleges brighter, in its new position than it was in the former position,

and this agrees with our observation, that when the image approaches the pupillary margin of the iris it becomes more vivid and narrower, proving that the convexity of the anterior surface of the crystalline increases towards the sides, and that the central portion is the flattest part of it. This of course is not the explanation given by Donders in his figure. He gives a diagram showing the image of the candle to be reflected in both distant and near vision from the centre or apex of the anterior convexity of the crystalline, and he has to account for its appearing to move towards the pupillary margin in near vision by supposing, as Cramer also had done, that this surface of the lens

moved towards the cornea. On the hypothesis that the change in the position and appearance of the reflected image, is the result of a slight movement of rotation inwards of the lens, this movement and alteration of figure of the reflected image are satisfactorily explained without the necessity of supposing any advance of its whole anterior surface towards the cornea, which, moreover, it is difficult to imagine could be effected by any action of the minute muscular apparatus of the ciliary ligament. The great apparent mobility of the image reflected by the anterior surface of the crystalline, its indistinctness, and its comparatively large size, are all accounted for by the slight convexity, compared

with the cornea, of that portion of the surface of the lens included within the pupil.

Were it quite a plane surface the observed image would be inverted; its upright position, therefore, is a proof that the surface it is reflected from is convex, and this an examination of the lens removed from the eye shows to be the case. A slight movement and a very slight diminution in size of the image reflected from the posterior surface of the crystalline, has been noticed by several observers and this is fully accounted for by the presumed rotation of the lens, for the image is then seen reflected from a more convex portion of the lens, and must consequently appear to change its position slightly and to be somewhat

smaller, but as the posterior surface is so very much more convex, and is seen through the aqueous humor and the crystalline lens, the change will be proportionately small and inappreciable except by such an instrument as Helmholtz's ophthalmometer.

The contraction of the iris in accommodation for near vision will correct any indistinctness of the image of the external object mirrored on the retina, by cutting off the more obliquely impinging rays of light, if indeed the peculiar ellipsoidal form of the convex surfaces of the crystalline does not completely provide against such indistinctness. In Donders' figures of the pupil, the contration of the pupil is not indicated (at least in the

English edition; I don't know how it is in the original Dutch work); but Cramer's figures show this very well. And here I may notice that the great corrective power of a small aperture - though well known to opticians - has rarely been thoroughly appreciated by writers on the optics of the eye. But any one may convince himself of this property of a small aperture in enabling him to see distinctly objects that are completely out of focus, when seen through a larger aperture. Thus if we place before the eye a card perforated by a pin-hole, we shall be able to read a book at less than an inch from the eye. The cause of this is, that the small aperture excludes from the eye all rays but those that impinge

perpendicularly on the refractive surfaces of the eye, and as rays entering a lens perpendicularly suffer no refraction, they penetrate to the retina distinctly and without confusion. It was probably owing to some unusual contractility of the iris diminishing the pupil to a very small size, that those two individuals cited by Sir Edward Home (in vol. XCII. of the Philosophical Trans.) were enabled to adjust their sight tolerably to distant and near vision, although their crystalline lenses had been extracted for cataract. A friend of mine, a gentleman upwards of forty years of age, can read moderate-sized print equally well at three inches or three feet from his eye. I notice when sight is accommodated for three-inch

distance that the pupil contracts to a very small aperture, and that it dilates as the book is removed further and further from the eye. The great difference we observe in the size of the pupil in different individuals, the sight being equally good, may be owing to the more or less perfect form of the crystalline. Thus a well shaped ellipsoidal anterior surface of the crystalline will admit of perfect vision through a larger pupil, whereas an irregularly shaped surface will require a smaller aperture for perfect vision. In youth when we may suppose the shape of the crystalline to be most perfect, the pupil is generally much larger, even when the eye is accommodated for near vision, than in old age. It is quite possible

that the altered shape of the crystalline in old age, may have as much to do with the loss of the faculty of accommodation as diminished muscular power of the ciliary muscle. Several observers — Helmholtz in particular — have observed an advance to the front, of the pupillary margin of the iris in accommodation for near vision. I can not say that I have been able to distinguish this forward movement. It must be somewhat difficult to appreciate a small advance of the iris occurring during its contractil motion, but I can readily understand that some slight advance of the pupillary margin on its external side must occur, owing to the tilting forwards of the crys-

talline lens, if, as is now generally believed, the iris lies upon the anterior surface of the crystalline, and there is not a posterior chamber of the aqueous humor as was formerly supposed. I believe I have in the foregoing pages proved that in accommodation of the eye from distant to near vision:- 1. There is no increase in convexity of the surface of the crystalline lens; 2. That the required shortening of the focus of the crystalline is affected by a slight movement of rotation of the crystalline from without inwards; 3. That the contraction of the pupil during this act corrects any tendency to the formation of a blurred image on the retina by cutting off the more obliquely impinging and,

therefore, superfluous rays of light. The observations and experiments that have led me to the above conclusions, may all be repeated by those who will take the trouble to do so. The chief difficulty in the matter is to educate the eye to observe the minute changes that occur in the image of the candle flame reflected from the anterior surface of the crystalline lens, viewed from both sides, but this difficulty will be readily overcome by patience and practice, and I have every confidence that all who repeat my experiments with the necessary care and skill, will arrive at the same conclusions as to the mechanism of the act of accommodation of the eye to near and distant vision. I should observe that the

image of the candle flame reflected from the anterior surface of the crystalline lens will not always be found, even through the respective angles at which the light and observing eye are placed indicated above and carefully maintained. It will be found to occupy different positions in the pupil in different eyes, sometimes nearer one or the other of its sides, sometimes higher up, sometimes lower down, and sometimes it will be impossible to find it at all with the light and the observing eye placed at the angles indicated; but wherever and whenever it can be seen at all, it will be found that its motion in accommodation, from distant to

near vision is in the direction I have indicated. The best eyes for observation are those of young persons with good sight and tolerably large pupils; but even under the most favorable circumstances the image reflected by the anterior surface of the crystalline is so ill-defined that any attempt to measure its size is futile, and its upright position is only obvious when the end of the candle flame gives a flicker. With regard to the muscular power by which the motion of the crystalline lens I have described, is produced, I am unable to say anything very definite. If I might be allowed to hazard an opinion, I would say that the action of the external fibres of the ciliary muscle on the zonula Zinnii

might be competent to produce this tilting operation. At all events such a movement of the crystalline would seem to be more within their power than the compression of the hard lens and the increased curvature which it has been hitherto supposed, were brought about by this extremely delicate muscle. Perhaps the appearance of the zonula Zinnii itself, when tested with acetic acid, described by Nuhn (see Donders, Op. cit. p. 25) may really be owing to some muscular fibres in that membrane, and, if so, they would seem well calculated to perform the movement in question. Whether the tilting motion of the lens I have described is limited to the lens and its capsule, which slide upon the surface of the hyaloid membrane,

or whether the movement of the lens imparts a corresponding movement to the vitreous humor, or at least causes a sort of undulation in its anterior portion I have not been able to determine. From the firm manner in which the lens and vitreous humor are united I should think the latter occurs, and perhaps the communication of the motion to the vitreous body may account for the phosphenes seen and described by Czermak. He noticed, namely, that when he went into a dark room and by his voluntary act strained the eyes as in accommodation for near vision, and then suddenly relaxed the strain so as to bring them into the condition of accommodation for distant

vision, has perceived a ring of light similar to that observed when the finger is pressed on the eyeball. This appearance may be accounted for by the sudden return of the vitreous humor to its normal shape or position, and if the actual movement be limited to the anterior position of the vitreous humor, there might be a shock or undulation transmitted through its whole body and conveyed to the retina, thus producing the sensation of light. I have often observed these phosphenes in the dark, but have not been able to produce them voluntarily as Czermak seems to have done. If any reliance can be placed on Hensen and Völcker, their remark that the choroid and retina moves forward during

accommodation for near vision, would not be inconsistent with the changes I have presumed to take place in the vitreous humor when the crystalline is tilted in accommodation for near vision. At least it is easy to suppose that such an advance of choroid and retina might occur at the external side of the eyeball." In order the better to study the various catoptrical and dioptrical phenomena that take place in the eye, Dr. Dudgeon has constructed a model of the eye on a scale ten times the size of the natural eye. It is made in every particular as nearly like the natural eye as possible. The length of the description is too tedious to be here given. Suffice it to say that all the experiments tried with this model fully substantiated his theory of ac-

accommodation. Year after year the pupils of Science make more and more discoveries, which have for ages lain hidden in her Treasure-house. But some of these discoveries have an air of uncertainty about them, and require substantial proof to rid them of this bearing and convert them into facts. Thus uncertain it has been with all the theories heretofore written in regard to accommodation. None of them have really been proven, but people have adopted the one nearest the truth, and which has the most plausible points, and have taken the rest for granted. I do not mean to say that the theory of which I have written may not be incorrect, but I do

mean to say that it seems to be more nearly correct and nearer being true, than any argument that has yet been brought forward concerning

Visual Accommodation.

Class Thesis

in Medical Class

on

Scarlet Fever

to

The Faculty of Medicine

of

the University of Maryland

by

Martin L. Billingsley,

in Application for

the Degree

of

Doctor of Medicine.

[illegible] of the

Univ[illegible] of Maryland [illegible] of Me-

dicine.

Gentlemen:- In accordance with the requirements of this institution, I herewith present my Thesis. A Thesis, in its true acceptation [illegible] the term is a pro[illegible]

[illegible]

tain by conclusive argument; but as a Thesis from an undergraduate in medicine must [illegible] be written prior to his having tested his Theories in active practice, the student per force must [illegible] the conclusions of others, which [illegible] been given him by his teachers [illegible]

[illegible]

[illegible] from the [illegible]

[illegible] make addition the [illegible]

[illegible]

Therefore but little [illegible]

[illegible] in a [illegible] of this

[illegible] read with care [illegible]

and hence deserved attent[illegible] to the

[illegible]

of Woman and [illegible]

[illegible]

[illegible] of Woodcuts I [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] and Scarlatina seem to be ac-

[illegible]

What is Scarlet Fever? I will [illegible]

as accurate as any that can be, [illegible]

the case that it is an epidemic [illegible]

contagious exanthema, characterized [illegible]

continued fever; by a scarlet [illegible]

[illegible] days [illegible]

[illegible] and ends about the sixth or [illegible]

[illegible]

[illegible]

the exanthemata were regarded as a single disease; or the physicians were unable to point out clear [illegible] differences. Even down to the tenth century the subject of [illegible]

one and the same disease. A regular [illegible] is said to have the honor of [illegible] or to describe them separately. This [illegible] Shortly after [illegible] Eng[illegible] write upon the subject — among other [illegible] (England), [illegible] the credit of being the first to point

out clearly and lucidly the
ence between the two diseases
to place Scarlet Fever in its
rank as a marm and separate dis
ease

Scarlet Fever does not [illegible]
pear in the same form - cases ca
[illegible]
indeed. there is no disease that pre
sents a greater difference as regards
character and severity of symptoms.
This has led to the division of it
different forms. [illegible]
they describe two, the normal and
the abnormal. [illegible]
and the [illegible]
[illegible]

[illegible] but I believe the varieties are [illegible] [illegible] [illegible] ters are, the scarlatina simplex, the scarlatina anginosa, and the scarlatina maligna. This is the division which I will attempt to follow. These varieties, however, are not perceptible in a large number of cases of Scarlet Fever, but they are so completely blended that it is often difficult or impossible to [illegible] the patient to decide to which [illegible] disease really belongs. I will endeavor to point out the peculiarities of each variety as [illegible] the causes of the disease.

Causes — As regards the causes of

the disease [illegible]
now no doubt that it is propagated both by contagion and epidemic influence. Its [illegible] however, has been denied [illegible] recent, consistent and learned in the profession, and even as late Prof. Dewees of Philadelphia, yet to [illegible] facts [illegible] that it is [illegible] point. Nevertheless, [illegible] is regarded as a disease to be classed among the contagious [illegible]. It [illegible] that it [illegible] disease, for it is often observed that persons exposed to its influence ex-

cases. [illegible]

[illegible] is affected. [illegible]

and does attack persons of any age; though by far the greatest number of cases is among children; and those under the Tenth year are much more liable to be affected. It is most frequent between the third and [illegible] year. [illegible]

[illegible] is [illegible]

Scarlet fever [illegible] death by blows. - It's poison seeming to select the tender ones of life on whom to do its dreadful work. The adult population is [illegible] extent. Free from this malady

[illegible]

in the prime of life, and

[illegible]

the time of year in which Scarlet Fever is generally prevalent, it is known that no season is exempted; yet there is a difference of opinion in regard to the season in which it prevails as an epidemic. Some writers state that it is most [illegible] as an epidemic in autumn and summer, others in that as [illegible], and again there are facts to prove that it [illegible] from the [illegible] and [illegible]

Both sexes are [illegible]ect to [illegible] disease. Some au[illegible] contend that it prevails to a greater extent among females [illegible], this is however, [illegible] [illegible] [illegible]. In my opinion the statistics prove that in [illegible] puberty it attacks both sexes with about [illegible] frequency, and a[illegible] [illegible] that [illegible] is [illegible] in females.

I [illegible] [illegible] [illegible] [illegible]

1st. Scarlatina Simplex: The name of this form explains

itself. It is Scarlet Fever on a [illegible] rash not well defined, and as a rule there is absence of sore [illegible] [illegible] this disease there is some inflammation of the tonsils. In this variety of Scarlatina, the patient is often able to pass through the entire attack without confinement to bed. The disease begins with a mild fever, sometimes preceded by a slight chill, which is followed by the scarlet eruption, [illegible] extending to the neck and chest

[illegible]

[illegible] or [illegible]

ing. This form commonly lasts four or five days, then convalescence begins and the patient rapidly recovers.

2d. Scarlatina Anginosa: In this variety the same symptoms appear, but with greater severity. The prominent feature is the inflammation of the fauces. This peculiarity is manifest from the onset of the attack, and the patients complaints are limited mainly to the throat. The tonsils [illegible]

great difficulty. The fever is much greater than it is in the simple form. The eruption appears generally on the second day of the attack, but occasionally it is not apparent till the third day. In examining the throat, all the visible parts, uvula, tonsils, soft palate, &c, are always found greatly inflamed. With these in there outlines expectations are what seemingly in appearance of pale were rare found in diphtheria. In the majority of cases there is also external swelling of the neck. as the

disease progresses all the febrile symptoms are increased and the patient suffers with dry and parched tongue and lips, the appearance being similar to what is seen in advanced cases of typhoid fever. Sometimes towards the close of the disease there are irritation of stomach and diarrhoea, this being to a certain degree, the direct result of the action of the poison upon the alimentary canal, and partially also dependent on some [illegible] secretion from the pancreas being swallowed. Often discharges

very exhausting to the patient and, if not speedily overcome are often productive of serious and fatal results. The eruption generally lasts longer than in the simple variety. In some cases the eruption is very slight or even entirely absent in the whole course of the attack. Sometimes it occurs in patches or is scattered over the trunk. The throat affections frequently remain for some days after the eruption has entirely disappeared. An extension of the inflammation through the Eustachian tube into the internal ear is liable

to occur. The inflammation of the submaxillary and lymphatic glands of the neck sometimes [illegible] exists in [illegible]. During the first two or three days of the disease, the tongue is heavily coated with a whitish yellow fur, which then dies away, and the tongue becomes smooth and shining and of a deep-red color – sometimes there are prominent papillae.

3d. Scarlatina Maligna –: This form is characterized by a rapid development of all the symptoms – the [illegible] [illegible] in the [illegible] [illegible]

predominate. There is intense cephalgia with delirium. A great number pass rapidly into coma and die within a short time. There is extreme disturbance of capillary circulation. Fever is very high, the thermometer in the axilla showing a temperature of 108° to 107°; and the pulse range from 120 to 160. In this form the peculiar poison of Scarlet Fever attacks the patient with suddenness and great severity, and in a large majority of cases nature cannot resist the attack of its enemy, but falls powerless and helpless. Con-

[illegible]

the [illegible]

Scarlatina in its malignant form. It can almost be described in a single sentence. The eruption, sore throat, and general prostration start in their train together, the poisoned system unable to resist, and often within [illegible] days [illegible] a human being [illegible] changed from a bright, [illegible] happy child to a cold and silent form of lifeless clay. Sometimes, however, nature is enabled to withstand the first attack, and the disease continues for three or four weeks, when the

[illegible]
[illegible]
[illegible] a [illegible] case of
patient struggles through the attack
and is again restored to ordinary
health, but frequently with dis-
eased accompaniments, which
will be considered under the
section of sequelae.

Sequelae:- Some of the path-
ological evils which follow this
disease are of as serious import
as Scarlatina itself. Many of the
sequelae are [illegible], [illegible],
long-continued, thereby rendering
the patient [illegible]
[illegible] and [illegible] to
[illegible] himself and his friends

Diseases of the ears of the nose and throat are very common. The Eustachian tube frequently becomes partly or entirely closed by the inflammation affecting it, rendering the motion partially or completely deaf. If exposed to cold while after recovery from Scarlet Fever, or during convalescence, the system then being very susceptible to the influence, Pleurisy, Pneumonia, Peritonitis, or some other affections of inflammatory character are very apt to follow. Dropsy, however, is more dreaded than any other disease. The

patient is liable to be thus affected for a long time after convalescence, especially when in case the patient should at any time be warned of the possibility of succeeding infections, so that he may guard against them.

Anatomical Lesions:- There seems to be nothing very characteristic of this disease described in writers, except the eruption on the surface and the morbid appearances in the blood. Lesions found in other relations after death are said to be due to concomitant infections or complications.

It has been shown by some that the mucous membrane of the stomach and intestines sometimes passes to a condition analogous to that of the cutaneous surface.

Diagnosis: The diagnosis of Scarlet fever is sometimes difficult to determine before the eruption makes its appearance, and is often mistaken for some other febrile disease, especially if Scarlatina is not present at the time, but the extreme heat of skin and the frequency of the pulse will lead us to suspect Scarlet fever. Cau-

after the eruptive characteristic has become manifest, it is sometimes difficult to distinguish it from [illegible] [illegible] affection. The main differential mark between this disease and measles is the almost constant absence of any catarrhal symptoms in Scarlatina, and its constant presence in measles. The rash, too, makes its appearance two days earlier in this disease than it does in measles, and is also of a brighter red color. From roseola it may generally be distinguish

ed in the blood or septicæmia never is attended by such symptoms. The eruption is rose color of a bright red and the patches of eruption are much smaller and more regular in shape.

Prognosis:- Concerning the prognosis of Scarlet Fever the single word uncertain will describe it as accurately as if a page were written upon the subject. Many cases of dread ful [illegible] ate, rapidly change for the better and the [illegible] arrest of death

both by physician and friends, is again thrown back to the pain [illegible] of [illegible] and [illegible] [illegible] mourn over what they consid[illegible] and their certain loss. And conversely in many instances [illegible] when friends were hoping over almost certain convalescence, and when the doctor smiles at his apparent success, the disease at once assumes a severe type and in a few short hours congratulations cease and the hope of success dies, and with it departs the life of the feverish

suffered. Late appearance of the eruption is unfavorable and a sudden retrocession equally as unfavorable. Cold surface also excessive heat of surface are unfavorable signs. The danger is greater in pregnant women [illegible] state. But in many such instances patients recover. Owing to such facts, the physician [illegible] careful and guarded in his prognosis.

Treatment:- This being a self-limited disease, the treatment is [illegible] known as expectant. When mild and uncom-

fication it requires very little treatment: If there is a tendency to constipation a mild laxative should be used, such as the citrate of magnesia, and in addition to this a simple diaphoretic mixture is all that is necessary. Sometimes the indication for the use of a mustard foot-bath and cooling lotions to the head and face. Often the mildest cases do well if let alone, but [illegible] [illegible] to service. In the majority of cases from the great severity of symptoms demand prompt and active medication from their initiatory stage —

[illegible] cases, cold affusions have been highly recommended. They are said to be especially beneficial in those cases in which the nervous symptoms predominate. They calm the nervous excitement and diminish the febrile movement in a marked manner. The temperature should be from [illegible] emulsion bath, at a temperature from 94° to 96°, will be found to be highly efficacious in some cases. Blood letting, leeching, and blistering should never be practiced. In the

course of the disease, to meet the constipation, and indications for the movement of the bowels rhubarb, calomel, and magnesia are recommended - but owing to the depressing tendency ~~tendency~~ of the disease, purgation should not be carried too far. As a febrifuge, which is generally demanded, acetate of ammonia and spirits of nitre are among the best. This plan may be carried out for some days - the physician being constantly carefully watching the case for any new developements that may arise. For the further ed.

vanced stages of the disease stimulants and tonics become indispensably necessary — Carb. ammonia, murat. ammonia, quinia, and tincture of iron are the best. The following prescription may be given in teaspoonful doses every two or three hours to a child four years old. ℞ Potass. Chlor., grs. xii. Liquor. Cinchon., grs. xii. Tinct. Ferri Chlor., gtt. lxxx. Glycerine ℥ii. Aqua Dest., ℥viii. M. — Acid treatment is highly recommended by some. The medical treatment of Scarlet Fever has varied greatly at different periods

[illegible]

[illegible]

But what I have mentioned seem to be nearly all the internal agents required in the treatment of Scarlatina. Local treatment is, however, of equal importance and should, in no case, be neglected. [illegible] the surface with glycerine and cold cream, or with sweet oil being of much service and a source of comfort to the sufferer. The throat symptoms in many cases, especially in the aforesaid varieties, require spe-

cial treatment. Applications should be made both internally and externally. Poultices and the application of salt pork and liniments are advised externally. Among the best psychic measures must be called the tonic. Tonics of iron and carbolic acid. In severer cases - those in which the inflammation spreads to a greater extent, or where false membrane is formed a solution of nitrate of silver is considered of great importance, and is the one generally used. In addition to the medication advised it is important that there should

be perfect ventilation, a proper temperature, and thorough cleanliness in all respects. With these above plan of treatment, we may hope for the happiest results. The attention of the profession has frequently been called to methods for the prevention of Scarlet fever. Many medicines have been employed to prevent the disease, but apparently with only little success. However, it is claimed by many of late years that belladonna has a prophylactic power. This is denied by others of high authority. As in small doses

it will do no harm. and considering the possibility of the good that it may produce, I think it should be employed. Carbolic acid is also advised for the same purpose — The sequel phaphylactic measure, and the one which should always be insisted upon is not to allow any social intercourse with persons unaffected or unprotected by a previous attack.

Thus I have sketched from a students standpoint of view the contagious history of Scarlet Fever. I have endeavoured to point out briefly its

most salient parts. And aspiring to present any thing new, but merely to travel the adventure's delightful path which our excellent Professors have marked out for us, and gather up some fragments of the rich fruitage thrown out by them as we hurriedly travel over the short, but pleasant road of our pupilage

M. D. Dillingham

A Thesis

on

Bronchitis

Respectfully submitted to the

Faculty of Physic

of the

University of Maryland

for the degree of

Doctor of Medicine,

by

C. Marion Wilkinson

of

Maryland

1874.

Bronchitis is an inflammation [illegible] in the mucous membrane of the bronchial tubes. There are two recognized forms, which are founded upon the size of the tubes affected. The first, is that in which the larger and middle sized tubes are alone affected; the second, commonly known as catarrhal bronchitis, is where the smaller tubes are involved, or the bronchioles [illegible], these being involved in succession. This is a much less frequent disease than that involving only the larger tubes and by far the more grave of the two. All nations and classes are acquainted with ordinary bronchitis. It is one of the most frequent of the pulmonary inflammations a [illegible] the-

most common affection of infantile life.
It [illegible] either [illegible]
secondary; that is it may occur
idiopathic disease, or as a complication
of other diseases, such as pneumonia, to
[illegible] by typhoid fever measles, [illegible] ia,
and [illegible]. As a complication of pneumonia
or tuberculosis it is generally limited and
is then known as "circumscribed bronchitis"
[illegible] the form denominated "diphthe-
-ritic bronchitis", characterized by the [illegible]
of lymph on the mucous membrane.
When bronchitis occurs as an epidemic,
it is called "influenza". [illegible] these various
forms may be reduced to two, viz., common
bronchitis. [illegible]
middle sized tubes are alone affected; and

[illegible] the [illegible] or the [illegible] and [illegible]
[illegible] medical [illegible] a common bronchitis is usu-
ally preceded by an inflammation of [illegible]
passages. [illegible]
extends to the bronchial tubes, it is said to
involve the pharynx and larynx; [illegible]
giving rise to a pharyngitis and laryn-
gitis; and in this passage it resembled a
hoarseness varying from a few hours to
one or two days. [illegible] sometimes it is not
preceded by a coryza. Pain is not generally
a prominent symptom in this affection;
though the patient usually complains of
a sense of constriction or tightness about
the chest, with more or less soreness under
the sternum. [illegible]
[illegible] d character. There is more or [illegible]

[illegible] sometimes, followed by fluxes [illegible]

[illegible] attack; [illegible] accompanied by a [illegible] chill. [illegible]

[illegible] attack, and although [illegible] is of a drag character, attended with more or less rain. Later in the disease ulceration begins, [illegible] and [illegible] coming [illegible] third, fourth days [illegible], the excretion becomes more abundant, consisting [illegible] or green [illegible]. [illegible] this stage [illegible] the [illegible] to [illegible] given [illegible] time. Debility is [illegible] previous healthy patient [illegible]

[illegible] tus [illegible] bronchitis

[illegible] lasts only about one or two weeks.

[illegible] always bi-lateral except when complicated

-cated [illegible] some other pulmonary disease, as

pneumonia or tuberculosis; it is then

c[illegible] circumscribed; and in this respect differs

[illegible] contrast with [illegible]

pleuritis. The clinical [illegible] ca[illegible]

[illegible] [illegible] that [illegible] ordinary

[illegible] [illegible] being a [illegible]

the lining [illegible]

[illegible]

[illegible] -ce [illegible]

[illegible] to [illegible]

[illegible] direction, [illegible] cause

[illegible] ly [illegible] the very [illegible] and the [illegible]

[illegible] c[illegible] r[illegible]

the temperature of the body considerably [illegible]
the cough becomes quite [illegible]
are dilated; the face becomes [illegible]
the countenance expresses distress [illegible]
the respiration becomes exceedingly frequent,
[illegible] sometimes reaching as to sixty or seventy
[illegible]
[illegible] accelera[illegible],
but [illegible] evolution t[illegible] [illegible]ation.
The expectoration is more or less [illegible], and
consists mainly of a [illegible]
matter streaked with blood. Death, sometimes
hurried by stupor, may occur [illegible] owing to [illegible]
the secretions which have accumulated [illegible]

and cure in the bronchi.

Anatomical Characters — An opportunity of observing the anatomical lesions in ordinary bronchitis is seldom offered, since the affection, when uncomplicated, rarely proves fatal. In the ordinary form the lining membrane of the larger and middle sized tubes presents the usual marks of inflammation [illegible] mucous membranes, viz., softening, swelling and redness. In the examination made early in the attack the [illegible] will be found dry, from arrest of the secretion of the mucus; later, it will be found covered [illegible] a thick, glairy, possibly of a yellowish or greenish hue — and tenacious secretion, of a muco-purulent character.

containing in abundance exfoliated epithelial cells. When the inflammation has extended into the small tubes, giving rise to capillary bronchitis, the lining membrane of these tubes may be found presenting the same common signs of inflammation as in ordinary bronchitis. There may be seen collapse of a greater or less number of lobules, due to the obstruction offered to the tubes by the mucopurulent [illegible] contained. There may also be found an emphysematous condition of some of the air-vesicles, especially at the upper and anterior portions of the lungs. This condition is supposed by some to depend upon the muscles of respiration acting more forcibly when the thoracic cavity is at rest, thus expelling the air-

from the lower lobe while it [illegible] (i.e.
accumulate in the [illegible] the lung,
thus producing a dilatation [illegible] the air vesicles
Although capillary [illegible]
-bed from the ordinary form,

[illegible] the cause of pneumonia. The
[illegible] and [illegible] can be forced from the
tubes into the vesicles, and thus produce an
occlusion of them, and when cut resembles
very much a tuberculous lung. These little
bodies, however, can be distinguished from
[illegible] their [illegible]
[illegible] cut, [illegible] have the appearance of
[illegible] [illegible] [illegible] caseous.
(passive) [illegible] exhibiting [illegible] of the
[illegible] lobule [illegible] discussed before the
[illegible] of [illegible]

the distinguished Dr. W.

[illegible]

[illegible] of di[illegible]

[illegible] occurred

[illegible] scurvy

[illegible] the pleura, and by ulcer-

[illegible] erate the pleura, giving

[illegible] Dr. [illegible] the

[illegible] in their course or a

[illegible] to occur

Vesicular Emphysema [illegible] already

[illegible] Atelectasis [illegible]

[illegible] pneumonia by the granular appearance and inflammatory exudate [illegible]

Symptoms - It is not necessary [illegible] the retina [illegible]

[illegible] the physical signs will not occur [illegible] attention in this [illegible] the cartilage when the [illegible] becomes [illegible] and dry, sonorous and sibilant rales may usually be heard in both sides of the chest; and [illegible] the lower and [illegible] the chest. The rales do least when the [illegible] produced in the larger and the sibilant in the smaller tubes. Later in the attack, when [illegible]

secretions are re-established, [illegible] and the [illegible]

[illegible]

the head. Percussion elicits [illegible] in bronchitis.

Causes. [illegible] to be the proximate cause of bronchitis [illegible] in the cause of [illegible] cause of the idiopathic form. But that it [illegible]

[illegible] we often see bronchitis appearing in the form of an epidemic, hence, it is reasonable to infer, that [illegible] in [illegible] is [illegible] in [illegible] [illegible] of the lining membrane of the bronchial [illegible] to [illegible] vice [illegible]

which do not [illegible] worms in the highest degree. Powder of Ipecacuanha and sometimes from newly-mown hay will produce a severe attack of bronchitis in some persons and many there are who are not in the least affected by them. It is very obvious that any liquid irritant being inhaled may give rise to an attack of bronchitis.

Diagnosis - It is usually very easy to diagnose a case of ordinary bronchitis.

It may be distinguished from pneumonia by the mildness of the constitutional symptoms; by the absence of dullness on percussion; by the absence of the crepitant rale; by the absence of the circumscribed flush upon the cheeks; by the hair being dull and substernal,

and not acute or lancinating; by the fact, as a rule, that pneumonia and pleurisy are unilateral, and bronchitis bilateral; and if the [illegible] chiefly pale present at the time of the examination and heard all over the chest, the diagnosis is considered conclusive. Capillary bronchitis may be distinguished from pneumonia by the absence of dullness on percussion. The presence of the crepitant rale would indicate pneumonia; but the subcrepitant may occur in either, but in pneumonia it is not observed on one side; except there be a double pneumonia, which is very rare. It may be diagnosed from asthma by the paroxysmal character of the dyspnoea in the latter, while it is [illegible]

by the absence in the former of the peculiarly labored breathing of the latter. A large pleuritic Effusion might give rise to great dyspnoea, but this would be easily recognized by the absence of all respiratory sounds over the Effusion, and relative flatness elicited on percussion.

Prognosis — This is generally favorable in ordinary bronchitis. Capillary bronchitis on the other hand is a very grave affection especially in young children, and old people. Sometimes destroying life in a very short time. It generally lasts in fatal cases in children about three or four days. It is not so grave a disease during adult life, though it is far from being without danger. If recovery takes place, convalescence is generally established [illegible]

O[illegible]

[illegible] the [illegible] the [illegible] expiration [illegible] divide [illegible] the cough and expectoration diminishing [illegible] length, [illegible] symptoms of a fatal issue and death, [illegible] by [illegible], [illegible] closes the scene.

Treatment. Ordinary bronchitis generally [illegible] little [illegible] hygienic treatment. [illegible] the fever be well marked [illegible] with a little [illegible] [illegible] given to allay the febrile action. The patient should be kept in a room of comfortably warm and uniform temperature. Lower's hundred-grain at bed time would be useful.

Bloodletting is very [illegible] necessary. [illegible] [illegible] Nitrous Anodyne might serve a very purpose in this affection. Chloroform Vapour is highly recommended in bronchial affections and is very useful in bronchitis, either in the acute, subacute or chronic form and in all stages. If there be much [illegible] stimulating liniment should be applied locally over the chest, & stimulating expectorants should not be used in the early stage. The inhalation of warm vapor [illegible] is used in the early stage. Warm poultices covered with oilskin [illegible] should be used during the acute or the attack. In the chronic form tends to become [illegible] irritation and blisters are our main remedies. Cow [illegible] are used if [illegible] used

[illegible] frequently, [illegible] and not so often. [illegible]

[illegible] the quantities are involved, or "Capillary bronchitis" exists, no agent which tends to [illegible] [illegible] tends [illegible] the existence of life until the disease shall [illegible] its course. Hence the [illegible] time [illegible] concentrated food, [illegible] of flesh. But the tuberculization should [illegible] two years. In children [illegible] the bronchi are loaded with tuberculous [illegible] [illegible] the [illegible] of the auxiliary efforts of expectoration,

the [illegible] would be as [illegible] and [illegible]
Ipecacuanha and alum being the best but
care should be taken not to repeat them
so frequently as to cause irritation.
Kermes might play a good last-ditch
blister use of doubtful utility. The antiphlo-
treatment, however, should never [illegible] cost sight
of; antiphlo indicated in proportion to
the [illegible] it favours.

A Thesis

on

Incised Wounds

respectfully submitted to the

Provost, Regents and Faculty in Physic,

of the

University of Maryland

for the

Degree of Doctor of Medicine.

by

Howard E. Ames

of

Baltimore, Maryland.

A.D. 1874.

Incised Wounds.

An incised wound is one with clean cut edges. It is produced in various ways, although strictly speaking it is a wound made by some sharp, cutting instrument, such as a knife or razor. We may have wounds produced by blunt instruments, but these resemble incised wounds, still they partake of the nature of lacerated wounds, and as such they should be classed. I will deal mainly with incised wounds made by the Surgeon, and shall throw out of consideration all others, however much they resemble incised wounds. Causes. They are produced intentionally by the Surgeon for the purpose of preserving the health & life of his patient. They vary in size from a few lines in length, to the incision required for the amputation

of the lip joint; there is also a great diversity in regard to their depth, some being quite superficial, while others extend deep into the tissues; they also vary in shape, as the straight, the circular, the crucial, the oval and the irregular incisions; still they are essentially the same being made up, in most all cases, of a series of straight cuts. Where an incision is to be made certain rules should be followed. The knife should be sharpened, as we know that the sharper the knife the less the pain, the smoother the cut, and consequently the easier and more rapid the healing. We should never make the incision any longer than is absolutely required; by doing so, we avoid disfigurement to an unnecessary extent, as we know cicatrices grow with the development of the person, and we should be the more particular in regard to wounds upon young persons, especially the fair sex.

Another point to be borne in mind, is to follow the course of the fibres of the tissues, through which we intend making our incisions; by so doing gaping will be greatly diminished, & the edges of the wound more easily held in apposition, in consequence of which the process of healing will be expedited to a considerable extent. Also, if possible, make the incision in such a manner that the cicatrix will be in one of the natural folds of the integument, on the various parts of the body. This is especially useful in operations about the face or neck. In making an incision, the tissue should be held firmly, prevent movement; enter the knife to the required depth, and with one strong sweep carry to the required extent. The wound should be of uniform depth, throughout its entire length. Results. The immediate results of a wound are, pain, bleeding, gaping, and the tissues

not excepting the epithelial and epidermoid, are supplied with sensory nerves; injury at once produces pain, the severity, however, differing in various parts of the body, as also in different individuals. The manner in which the incision is made also influences the amount of pain; the sharper the knife, the quicker the incision, especially the [illegible], which is highly supplied with sensory nerves, modifies the pain. <u>Haemorrhage.</u> Nearly all of the tissues are highly vascular, with but few exceptions, therefore no incision can be made, without dividing [illegible]. The diagnosis between the hemorrhages from these several vessels is easily made, by [illegible]; the arterial blood being readily recognized by its bright scarlet colour and by the intermittent jet or spurt, while [illegible] capillary blood is of a darker color flowing more steadily.

Gaping depends on the direction of the incision and the situation of the wound and is due to the elasticity and contractility of the tissues. Treatment. The first step in the treatment which requires our prompt attention is the arrest of the hemorrhage. To accomplish this we have various agents at our command; these may be divided into three classes. 1st by ligation or tying the bleeding vessel, 2d Compression, 3d by remedies which cause rapid coagulation of the blood, called styptics. If no big blood vessels be cut and we have only capillary bleeding to contend with, the treatment is very simple. An application of cold water or even exposure to the air, will often suffice, if however a large vessel is cut, we must adopt a speedy and effectual method to prevent the loss of blood, for this purpose nothing is better than the ligature. To apply the ligature

the bleeding artery should be seized with an artery forceps or hooks, and drawn out of its sheath; place the ligature around the artery, being careful not to include a nerve, clear the forceps and tie securely. After the artery has been firmly secured out of [illegible] and [illegible] the [illegible] [illegible] out of the wound by the [illegible] knot. The ligature should be of [illegible] strength and will [illegible] the absorption of fluids. If we cannot ligate at the cut extremity we must resort to distal ligation; but as this is so seldom required, I will not discuss it.

Compression is a ready, efficient and simple means for arresting haemorrhage from small wounds. If [illegible] [illegible] into the incision, retaining it in position a short time when it will effectually arrest all haemorrh.

Another useful method for arresting haemorrhage from small arteries is by tying [illegible] vessel in two parts and [illegible]. Styptics are valuable remedies in arresting hemorrhage; they act by partly causing contraction of tissues, and inducing rapid and firm coagulation. We have many medicines that will accomplish this object, but I mention but few. Cold in shape of water or ice, applied locally is very satisfactory. Also Turpentine Acid. Tannic. or the Persulphate of Iron; the latter is [illegible] of all. In applying it, a piece of lint or [illegible] is soaked in a solution and applied directly to the bleeding surface. After the bleeding has ceased, we should then proceed to the cleansing the wound, which may be done in a variety of ways. Allow the wound to remain [illegible] for sometime or until it presents a glazed appearance.

If we desire the wound to heal quickly, bring the edges in as exact [illegible] as possible, to accomplish this we may use sutures or adhesive strips, or if the wound is quite superficial [illegible], which forms an insoluble coating, allowing evaporation of the Ether. Where there is great tension, we must use the sutures or adhesive [illegible] if [illegible] not [illegible] very [illegible], but if it becomes [illegible], it loses its hold, and unless fresh it is objectionable. In [illegible] wounds, the sutures are the best means of closing them. The suture may be either of silk, silver, catgut or horse hair. I will not go into the discussion of their seperate merits, but will only say that [illegible] is most [illegible] for [illegible], as it is more flexible and easily removed and will not absorb liquids if well waxed. There are several

varieties of sutures; the interrupted, where the stitches are placed at certain intervals along the edges of the wound; the glovers or continued suture is where the stitch continues the whole length of the wound but this is little used except upon the cadaver or intestine; the quill and Hare lip sutures are also of the variety which are sometimes used for special operations. In making these sutures we must have a needle to pass the thread through the issues; for this purpose we may either employ the straight or curved needle. it must however be sharp pointed with cutting edges. In wounds where we expect great tension, we should not depend entirely upon the sutures but use adhesive strips in addition. A roller is often beneficial for keeping the lips of the wound together, this is frequently painful. The patient should be placed in a

The wound now being closed the next thing we will have to discuss is the kind of dressing. We have a great variety but I will only select a few of those most highly recommended. A dressing of [illegible] [illegible] [illegible] [illegible] recommended by [illegible], Carbolized oil, dilute Carbolic acid, Chloride of Zinc or Soda gr xxx to ℥i of water, have been lauded by others. But the [illegible] is [illegible] cold water [illegible] [illegible], this will be found satisfactory and quite as useful as any of the others. Besides the dressing we must try to prevent the appearance of suppuration, erysipelas and gangrene. This we must accomplish by strict [illegible] to the [illegible] but with proper attention to patient and wound. We should watch the wound carefully, and if the edges present a red or swollen appearance we should remove the

nature without delay; if not we can let the remains [illegible] eight days without injury. For the relief of pain some of the preparations of Opium will be found to do their part of the treatment to the satisfaction of both Patient and Surgeon if properly administered.

Second Case.

Delirium.

An

Inaugural Dissertation

Upon

Obstetrics

By

V. A. Smith

Baltimore, Md.

1893-94.

Proctitis

The term proctitis has long been employed to designate an inflammation of the mucous membrane lining the large intestines. This name itself is not a very distinctive one: as it means in its strict application, one [illegible] difficulty; but it is not easy to give a name conformable to the inflammatory operation, which [illegible] in our nomenclature to express the entire seat of the disease, even as the term

does not imply cause, [illegible]
erroneous inference may [illegible]
time to explain it.

Dysentery may be either simple
or complicated. Epidemic, or
sporadic, and then a simple
sporadic case may be either
acute or sub-acute. Now since
complicated dysentery only implies
the discussion of two diseases,
and as there are no [illegible]
affected by an epidemic case
taken singularly, which may
not even be [illegible] the [illegible]
in sporadic cases, I will
[illegible]

discussion of simple acute sporadic dysentery.

Morbid Anatomy. In mild cases of dysentery the inflammation may be confined to very small portions of the mucous membrane; but as these are generally not in recovery, there are but few opportunities afforded for post mortem examination. In these cases there are no symptoms to indicate any obvious ulceration of the mucous membrane; but we suspect only a slight inflammation of a small portion of the membrane, with but little

submucous infiltration, and which soon ends in recovery by resolution. But in more severe cases, the mucous membrane of a much larger surface is affected, and becomes swollen, soft, puffy, with ecchymosed patches of effused blood, and submucous infiltration, ulcerations, more or less extensive, which may or may not perforate the bowel, some of which have healed leaving cicatrices. These ulcers may not begin in the glands. We also find more or less [illegible], and resembling [illegible]

which may become adherent to the walls of the intestines, produce some very obstinate and troublesome strictures. The inflammation does not always affect the entire tract of the large bowels, but may appear in distinct and separate patches accompanied by the above named results. I will not attempt to prove whether the follicles are primarily or secondarily affected. But were I to the altered pathologist, as I do not consider it [illegible] very practical [illegible] after treatment. The mucous [illegible]

some times found considerably inflammed, and in some rare instances to contain pus.

Pathology. There is but little as yet known about the pathology of dysentery. The local and general phenomena, which make up the clinical history, only point to the local affection internally. Often it seems, as a sequel to other diseases, there is no established connection between them, or relative appearances which are constant.

Symptoms. Dysentery sometimes presents a variety, and

combination of circumstances surpassed in gravity by no disease to which the human organism is subject. It is said to have occurred without premonitory symptoms; but I am persuaded that this little much acute inflammations affecting mucous membranes is always preceded by, more or less, irritation which may be so slight as to be entirely overlooked by both patient and physician. The, too numerous, symptoms when observed are such as are characteristic of undoubted irritation, as general uneasiness

lassitude, impaired appetite, griping pains in the abdomen, and irregular bowels. These symptoms usually proceed by an appreciable interval, those characteristic of the inflammation, or depositing proper. They are often of such short duration, or so mild in character as to have been overlooked, and then the disease is said to have occurred without premonitory symptoms. The symptoms of the disease proper are both local and general, or constitutional. The local symptoms usually manifest-

their appearance [illegible] times however, the local and febrile phenomena occur almost simultaneously, the patient being attacked with a chill almost at the same moment, that he begins to complain of pain, and uneasiness. The local symptoms are the most characteristic of this disease. In the beginning there are usually grinding pains in the abdomen, technically called lamina, irregular in their position and frequently followed by an evacuation with little or no relief. As the disease advances

These pains seem to concentrate in the colon, and rectum. The evacuations become more frequent give less relief, and are attended with much straining, and tenesmus. Notwithstanding the frequently returning inclination to evacuate the bowels, the patient is unable to evacuate more than a little bloody mucus. Soon a sense of weight, or burning is experienced in the rectum. The evacuations give rise to a cutting pain in the anus, which leads the patient to dread their return, and to resist the inclination to go to stool, as

ing as Brasilli. The number of evacuations in children is often six; but may be, as many as thirty or more. They are small, and usually consist of an admixture of mucus and blood, with more or less fæces, and in some severe cases small portions of coagulable lymph or shreads of false membrane. Vitiated bile, with little balls of coagulated matter are occasionally intermingled, and in a few instances little lumps of hardened fæces called scybala are discharged. At first the discharges have

little odor; but they soon acquire a very peculiar disagreeable smell, quite distinct from the feculent, and most characteristic of the disease. There is usually, more or less, tenderness upon pressure over the abdomen; but this symptom is sometimes absent. When present it usually marks the extent of the inflammation, and should always be absent. When tenderness appears in the epigastric region it shows the extension of the inflammation to the transverse colon. From the close proximity of the bladder

to the seat of this disease this organ some times becomes irritated, which irritation extending throughout the mucha over have in addition to the local symptoms above mentioned, frequent and difficult micturition. General Symptoms. Fever is always present, except in very mild cases, involving but a small extent of surface; The pulse is accelerated, and in the beginning usually full and forcible. The skin warm and dry. The urine scanty. The tongue moist and covered with a whitish fur. The sense-

tion of [illegible] usually diminished. Sometimes from a preternatural weakness [illegible] of the system, or from the severity of the attack, the vital organs of the system [illegible] flag, while this condition prevails we have a feeble and thread like pulse, an indescribable feeling of sinking in the epigastrium, cold clammy skin, haggard expression of countenance, and frequently nausea and vomiting. Fortunately in the majority of instances these symptoms speedily abate, as soon as the irritating substance has

[illegible] in a few cases the symptoms [illegible]. The excretion become excessive, the abdomen bloated, and the patient dies in a very short time. The duration of a case of cholera depending so seldom longer than a week or ten days. When the symptoms subside, in to state in this time, they are apt to become increased in severity. The patient now becomes weak and exhausted. The tongue becomes dry assuming a brown or black hue, as the case of [illegible] [illegible] [illegible]

[illegible] of [illegible]
[illegible] pulse, frequent
and irregular. She starts in
frightful, and affrightened. The
skin is cold, and damp. The
abdomen more tender, swollen
and in some cases [illegible]
the stools often consist [illegible]
kind of bloody serum. Very
often, the worst of these symptoms
the patient may recover: though
convalescence is slow and
tedious, and the case not
unfrequently runs into the
chronic form of the disease.

Prognosis. It is should be estimated by the severity and duration of the symptoms – the previous condition of the patient's system, and the extent of the inflammation. If the deposition is about to terminate favorably the evacuations are less frequent, and more copious, and – feculent in character. The pains usually subside gradually – the tenesmus diminishes and it takes a week or but a diarrhœa remains. A sudden cessation of tenesmus and pain with lipothymies, coldness of the extremities, a cold clammy

a pale yellow, leaden or purplish hue about the nails, a very feeble frequent and irregular pulse; hiccough, involuntary vomiting, delirium, subsultus, and stupor, are very unfavorable symptoms and together usually portray a speedy dissolution. Such symptoms are common in typoid pneumonia, and sometimes are seen in severe epidemics; but we rarely meet with such in simple acute sporadic typoid unless it occurs as a complication of some more

[illegible] disease.
When one is [illegible]
for [illegible] days
without abatement the prognosis is very unfavorable.
Cause. Heat and cold are both acknowledged causes of this disease — especially heat when excessive heat during the day and succeeded by cold damp nights. The heat of tropical climates by producing derangements of the hepatic functions is very productive of this disease, and frequently with fatal results.

Sour and acid fruits often produce the disease in children and in fact large quantities of any indigestible food may give rise to it. Diarrhoea sometimes runs into dysentery. But the most potent cause is an epidemic influence. Extreme cold exhausts the bowels and already irritated may give rise to a very severe attack of dysentery.

Treatment. This consists of fresh, local remedies or such means as are adverse to the alimentary canal, and accordingly of those used to prevent malfermentations in the system at large. If there is much fever with frequent, and ineffectual efforts to evacuate the bowels, we first give a dose of some mild saline aperient to remove the irritating substances, and allay the fever. For this purpose Sodae et Potassae Tartras is very effectual: or

Mannitis [illegible] on a
case of [illegible] —
[illegible] drain has been used
with success. But should the
discharges be large, serous and
bloody or resembling the washings
of flesh and the patient weak
and exhausted, we must not
use saline cathartics. Here
we can use a circumstance Castor
oil ~~one~~ or Aro. Syr. Rhei are
the best especially Rhei on
account of its astringency
afterwards. If the stools show
hepatidity of the liver the fatty,
or [illegible] of the very best.

Blue Mass

[illegible] Phil

Camp. Extr. Colocynth

Gum Guaiacum aa gr x

M. ft. Pill ij. [illegible] Pills every [illegible]

hours until they operate.

After the bowels have been

cleared with Pulv. Opii in

doses of [illegible] grains every

four hours, with or without

astringents and after evacuation,

pick an eye to the disease

should there be any accidity

of the alimentary canal, the

Chalk Mixture with Kino. and

[illegible] are indicated.

In mild cases Sulph Iron — gr j

Ext Nux Vomica and Ext

[illegible] ā ā gr j with an

aloe an excellent purgative.

The following has been used by

Prof W. T. Howard M.D. with

important results:

℞.

Morphia Sulphas	gr ij
Pulv Kino	ʒ j
Creosot pt	ʒ iij
Bismuth Sub Nitrate	ʒ ij
Mucis Moschat	gr xij

M ft. Chart xij S. 1 every six hours.

Diet [illegible]

of cases is highly necessary
[illegible] by some authorities
It will be well to see
that the bowels do not
become constipated for then
[illegible] the fever will not
be of an isolation and
cause the disease to recur.
After the discharges have been
checked tonics will found
necessary to build up the
system, and for this purpose
Flavoria's Lunature of Gentian
is one of the best.
One of the most important
things to be attended to is

regulation of the diet.

From the very first the patient should be confined to a diet of sweet milk, stale bread, and fresh butter, with soft-boiled eggs, and rice well-cooked. When the disease becomes chronic and rebellious to treatment, and when experience nothing will be found more beneficial than a visit to the Alum Springs of Va.

1874

Thesis
on
Dysentery of Children.
Submitted to the
Faculty of Physic
of the
University of Maryland
For the Degree of
Doctor of Medicine.
by
J. T. Shepherd
of Georgia

Dysentery

Definition. Inflammation of the Colon and Rectum. Causation. The disease has an obvious relation to climate and the season of the year, being more frequent in hot climates and in summer. It is especially frequent when the days are hot and the nights are damp and chilly. A few days of rainy weather in

summer will often cause the bowels complaints of children to assume the dys enteric form. It is often epidemic and sometimes associated with intermittent fever. Bad air and insufficient food are frequent causes. Our knowledge of the epidemic cause is not at all precise.

It may be idiopathic or secondary. it frequently occurs after measles. In children it is more common

after the first dentition.

Anatomical Lesions are chiefly confined to the rectum and colon, and are similar to those in entero-colitis, though more severe. The mucous membrane is reddened, swollen and softened, the swelling being due partially to sub mucous infiltration. The follicles are often enlarged excoriated and ulcerated and in grave cases particularly of the epidemic

form there is a false membrane sometimes formed. Inflammation and its results are best marked in the rectum and sigmoid.

Symptoms. In most cases it begins as simple diarrhoea, and the onset is gradual, though it may be sudden. After two, three, or four feculent dejections, the stools become scanty and contain a jelly like

mass, streaked with blood, which is passed with straining. As the disease progresses the stools are composed of mucus, epithelium, lymph and blood, and when the inflammation is very severe fibrinous flakes mixed with greenish or yellowish matter. Scybala are sareby seen in the dysentery of children. In adynamic cases the discharge are

a sero-sanguinolent fluid with mucus and epithelial scales floating in it. In the gravest cases the dejections resemble disorganized blood which never coagulates or very much like pokeberry juice. Dr Howard has seen only two recoveries after stools of that kind. If the disease continue the dejections become mucus and blood mixed with pus. The discharge

are passed with evident pain. The number of stools vary with the severity of the attack, as also does the amount. When the disease is mild or only moderately severe six, eight or ten stools in twenty-four hours, but sometimes more, up to twenty, thirty or even more. After a few days the abdomen becomes warmer than usual, and in some cases tender on

pressure. Tympanitic distension is rare, on the contrary the abdomen is generally flat and even depressed especially in grave cases. There is little or no fever in mild cases, but in severe it is high for the first few days. After some days the child becomes emaciated with sunken eyes and cool skin.

Diagnosis. The frequency of the discharges, the tormina and tenesmus, taken with the distinctive character of

the stools, render the diagnosis easy, obvious and unmistakable. About the only disease it can be confounded with is piles and that is very rare in children.

Prognosis. In mild cases it is favorable, but when the fever is violent from the onset followed by a tendency to coolness and collapse, and the stools are very frequent consisting of nothing but mucus and blood, or are large and sero-sanguinolent with

fibrinous flakes or above all present, the appearance of Poke berry juice, the prognosis is very grave.

Treatment. The most important indication is rest, the child must be kept quiet. Whenever there is any unwholesome food in alimentary canal, give a mild laxative, as the castor oil mixture. If the disease be not arrested by the laxative give an anodyne enema Tr. Deod Opii gtt v to ½ ℥ss

mucilage or starch water. it is preferable to give an anodyne injection at night and after an evacuation. During the day small doses of Pulv Dov. should be given, pay great attention to diet, When the disease is more severe, attended by high fever, with small mucus & bloody evacuations give Rochelle salts in small doses, so as to produce serous discharges, Saline cathartics diminish congestion,

Having gotten rid of the mucous stools, give an anodyne enema, Subnitrate of Bismuth internally is good, When the fever is high, the pain severe, considerable pain on pressure over the abdomen, and especially when the tormina and tenesmus are frequent and abiding, the most marked relief is obtained from the application of several ~~ice~~ leeches, (American never always) around the anus.

venesection is very rarely if ever necessary. Formerly Mercurials were given, but they have been superseded in India, by Ipecacuanha, where that practice originated. Dr West advises Calomel and opium. The warm bath, fomentations, and poultices to abdomen are very soothing and beneficial. If child is old enough to understand, it must not be allowed to go to stool, every

time it feels a desire to do so, nor must it be allowed to sit straining for a long time, for fear of prolapsus. Should never give calomel in ordinary cases, but in malarious climates, there is often great nausea and vomiting, then give calomel gr ¼ with ℞ Deod Opii gtt j until nausea is relieved. When there are large sero-sanguinolent discharges give Plumbi acetatis with Opium or Alum, every

two or three hours. If there be a tendency to coolness of the surface with perspiration, oil of turpentine in the dose of gtt ij to v, always in emulsion is the best remedy. Injections of Plumbi acetas gr iij or argent nitras gr 1/4 to 1/2 may be given. When complicated with malaria, always give Quinia, best hypodermically for children 2 1